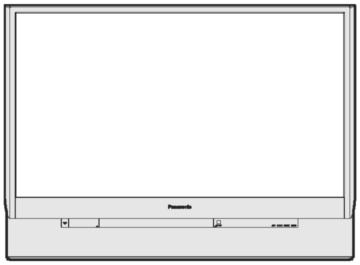
ORDER NO. MKE0505852C1

Service Manual

Multi Media Display



PbF
Solder Lead free

PT-44LCX65-K
PT-52LCX65-K
PT-61LCX65-K

ITEM	SPECIFICATION	1	2	3
LCD panels	0.7" Poly silicon TFT LCD panel x 3	○	○	○
Drive method	Active Matrix 16:9 Aspect Ratio panels, TFT (Thin Film Transistor)	○	○	○
No. of pixels	921 600 (1 280 x 720) stripe pixels x 3 panels (16:9)	○	○	○
HID Lamp	100 W HID (High Intensity Discharged) Lamp	○	○	○
Display	44 inch, 16 : 9 aspect ratio 52 inch, 16 : 9 aspect ratio 61 inch, 16 : 9 aspect ratio	○ — —	— ○ —	— — ○
Video input signal	1.0 Vp-p, sync negative, 75 Ω terminated	○	○	○
S-Video input signal	Y (luminance signal): 1.0 Vp-p, sync negative, 75 Ω terminated C (chrominance signal): burst 0.286 Vp-p, 75 Ω terminated	○	○	○
RGB input signal	Video signal: RGB Analog (0.7 Vp-p, 1.0 Vp-p with sync on green, 75 Ω) Sync signal: H/V separate, H/V composite H-Frequency: 31.47 kHz-68.68 kHz (TTL Level) V-Frequency: 56.25 Hz-85.08 Hz (TTL Level)	○	○	○
Component Video input signal	Y: 1.0 Vp-p, with sync, 75 Ω. P_B, P_R: ±0.35 Vp-p, 75 Ω. YP_BP_R Signal: 480 i H-Frequency 15.73 kHz V-Frequency 29.97 Hz 480 p H-Frequency 31.47 kHz V-Frequency 59.94 Hz 720 p H-Frequency 45.00 kHz V-Frequency 60.00 Hz 1080 i H-Frequency 33.75 kHz V-Frequency 30.00 Hz	○	○	○
Audio input signal	0.5 Vrms	○	○	○
Audio output signal	0.5 Vrms	○	○	○
Speaker	2 Speakers 30 W [15 W + 15 W] (10 % THD)	○	○	○
Tuner	ATSC digital tuner with digital cable module	○	○	○

ITEM	SPECIFICATION	1	2	3
Channel Capability (ATSC/NTSC)	VHF/UHF 2-69 Cable 1-135	○	○	○
Input Terminals	S-Video Input: Mini DIN 4-pin Video Input: RCA Pin Jack RGB Input: D-Sub mini 15-pin Component Video Input: 3 RCA Pin Jacks HDMI Input: HDMI type A Connector Audio Input: 2 RCA Pin Jacks (L-R)	○	○	○
Output Terminals	Video Output: RCA Pin Jack Audio Output: 2 RCA Pin Jack (L-R) Digital Audio Output: Optical Connector	○	○	○
SD Card Slot	SD Card (8 MB/ 16MB/ 32MB/ 64MB/ 128MB/ 256MB/ 512MB/ 1GB (Maximum))	○	○	○
Power Source	AC 120 V, 60 Hz	○	○	○
Power Consumption	Power ON: Approx. 180 W (When audio is at maximum) Power OFF: Approx. 0.3 W (When cooling fan is stopped)	○	○	○
Operating Conditions	Temperature: 0 °C~35 °C (32 °F~95 °F) Humidity: 20 %~80 % (non-condensing)	○	○	○
Weight (Mass)	31 kg (68 lbs.) 35 kg (77 lbs.) 42 kg (93 lbs.)	○ — —	— ○ —	— — ○
Dimensions (W x H x D)	1 048 mm x 769 mm x 374 mm (41-1/4 inch x 30-1/4 inch x 14-3/4 inch) 1 225 mm x 893 mm x 431 mm (48-1/4 inch x 35-3/16 inch x 17 inch) 1 424 mm x 1 029 mm x 468 mm (56-1/16 inch x 40-1/2 inch x 18-7/16)	○ — —	— ○ —	— — ○
Solder	**This model uses lead free solder (PbF).**	○	○	○

1. PT-44LCX65-K
2. PT-52LCX65-K
3. PT-61LCX65-K

Weight and dimensions shown are approximate.
Designs and specifications are subject to change without notice.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1 SAFETY PRECAUSIONS

1.1. GENERAL GUIDELINES

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC Plug before disassembling this unit.
3. It is advisable to use an isolation transformer in the AC supply before servicing.
4. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
5. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shield, and isolation R-C combinations etc. are properly installed.
6. After servicing, be sure to restore the wires, leads, insulation barriers, shields, etc.
7. After servicing, make the leakage current checks to prevent the customer from being exposed to shock hazards.

Caution:

Use a separate Isolation Transformer for this unit when servicing.

1.2. LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. For physically operated power switches, turn power on. Otherwise skip step 2.
3. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screwheads, connectors, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1 MΩ and 12 MΩ. When the exposed metal does not have a return path to the chassis, the reading must be infinity.

1.3. LEAKAGE CURRENT HOT CHECK

1. Plug the AC cord directly into the AC outlet.

   Do not use an isolation transformer for this check.
2. Connect "A" to exposed metallic part on the set. And connect "B" to a good earth ground, as shown in Figure 1.
3. Use an AC voltmeter, with 1 kΩ/V or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 V RMS.

   A leakage current tester (Simpson Model 228 equivalent) may be used to make the hot checks. Leakage current must not exceed 1/2 mA. In case a measurement is outside of the limits specified, there is a possibility of shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

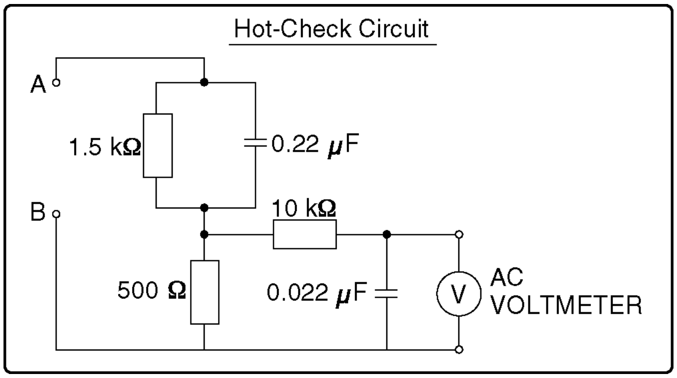


Figure 1

1.4. UV-PRECAUTION

1. Be sure to disconnect the AC Plug when replacing the lamp.
2. Since the lamp reaches a very high temperature during its operation, wait until it has completely cooled off when replacing the Lamp Unit.
3. The lamp emits small amounts of UV-Radiation.

   Avoid direct-eye contact by covering the Lamp and wearing the UV protective glasses.
4. The high pressure lamp involves a risk of explosion.

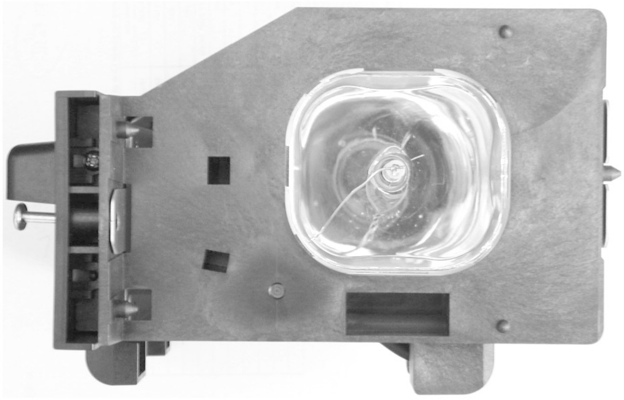


Figure 2

This product has a High Intensity Discharge (HID) lamp that contains a small amount of mercury. Disposal of these materials may be regulated in your community due to environmental considerations. For disposal or recycling information please contact your local authorities, or the Electronics Industries Alliance: <http://www.eiae.org.>

2 PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified as "antistatic (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

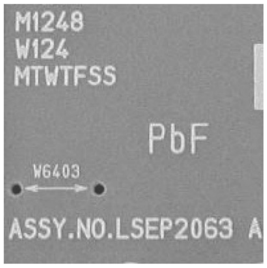
   CAUTION :

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

3 ABOUT LEAD FREE SOLDER (PbF)

Distinction of PbF PCB:

PCBs (manufactured) using lead free solder will have a PbF printing on the PCB.
(Please refer to figures.)



Printed case

CAUTION:

- **Pb free solder has a higher melting point than standard solder;**
  Typically the melting point is 50 °F - 70 °F (30 °C - 40 °C) higher.
  Please use a soldering iron with temperature control and adjust it to 700 °F±20 °F (370 °C± 10 °C).
  In case of using high temperature soldering iron, please be carefull not to heat too long.
- **Pb free solder will tend to splash when heated too high (about 1100 °F/600 °C).**
- **All products with the printed circuit board with PbF stamp or printing must be serviced with lead free solder.**
  When soldering or unsoldering, completely remove all of the solder from the pins or solder area,
  and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

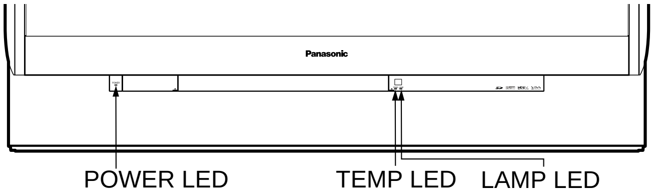
Recommendations

Recommended lead free solder composition is Sn96.5 Ag3.0 Cu0.5.

4 SERVICE NOTES

LED INDICATIONS FOR ERROR CONDITION

Each LED indication facilitates finding the cause of the error.
When an error is detected, the Lamp comes off and the LED on the front will flash.



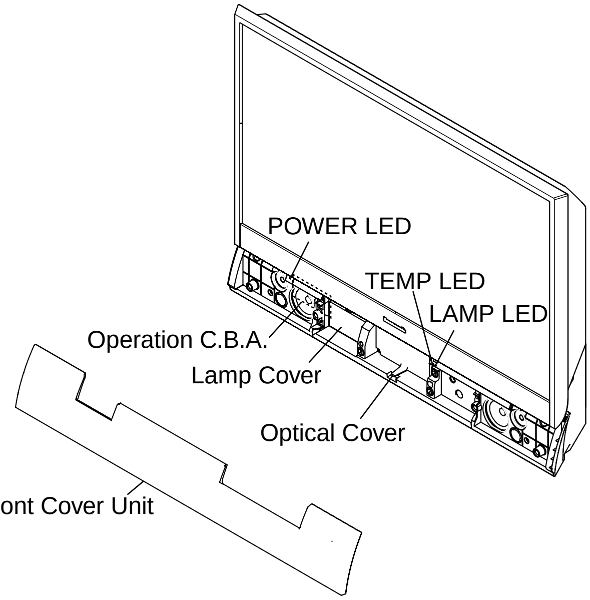
					(Note 2)	(Note 3)
Error No.	**Error Information**	**POWER LED**	**TEMP LED**	**LAMP LED**	**OSD**	**LAMP OFF**
1)	**Fan1, Fan2 or Fan3 stopped**	flashes orange once every 5 seconds	-	-		○
2)	**Lamp Cover open**	flashes orange twice every 5 seconds	-	-		○
3)	**Temperature Sensor shorted or open (Thermistor 1 C.B.A.)**	-	flashes once every 5 seconds	-		○
4)	**Abnormal Temperature (Thermistor 1 C.B.A.)**	-	flashes twice every 5 seconds	-		○
5)	**Ballast Error (abnormal Lamp or Ballast)**	-	-	flashes once every 5 seconds		○
6)	**Ballast Error (abnormal Lamp voltage)**	-	-	flashes twice every 5 seconds		○
7)	**Ballast Error (abnormal temperature)**	-	-	flashes 3 times every 5 seconds		○
8)	**Ballast Error (other causes)**	-	-	flashes 4 times every 5 seconds		○
9)	**Abnormal Voltage (+17V, +9V, +5V line) for LCD Drive C.B.A.**	flashes orange 7 times every 5 seconds	flashes 3 times every 5 seconds	flashes 3 times every 5 seconds		○
10)	**Temperature Sensor shorted or open (Thermistor 2 C.B.A.)**	-	flashes 3 times every 5 seconds	-		○
11)	**Abnormal Temperature (Thermistor 2 C.B.A.)**	-	flashes 4 times every 5 seconds	-		○
12)	**Clogged air filter**	-	flashes 5 times every 5 seconds	-	○	○

Note:

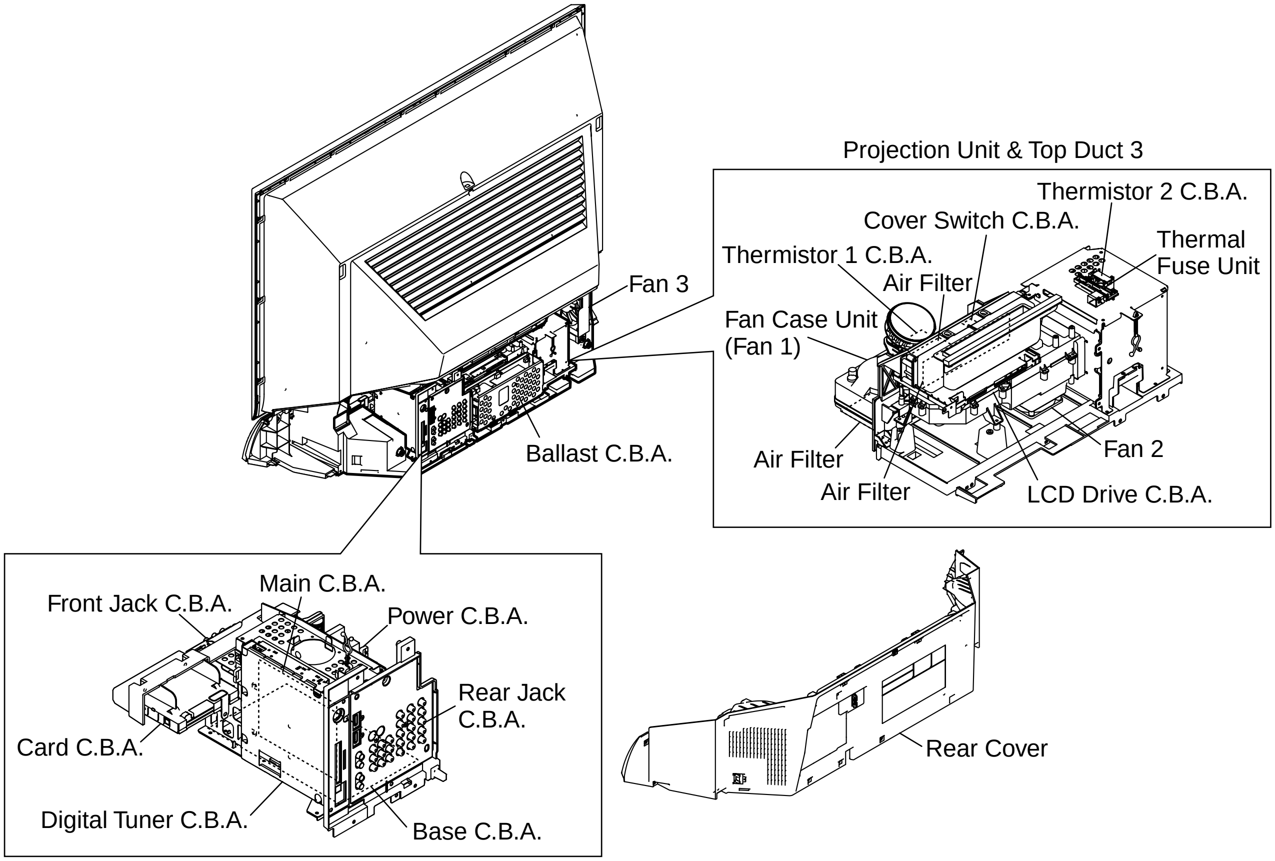
1. When two or more errors have occurred at the same time, the LED will alternate flash patterns as shown above every 5 seconds.
2. Warning OSD appears when the air filter is clogged.
3. LAMP OFF: The LED will flash immediately after the Lamp comes off.

MAIN PARTS LOCATION

<Front View>


POWER LED
TEMP LED
LAMP LED
Operation C.B.A.
Lamp Cover
Optical Cover
Front Cover Unit

<Rear View>


Projection Unit & Top Duct 3
Thermistor 2 C.B.A.
Cover Switch C.B.A.
Thermal Fuse Unit
Thermistor 1 C.B.A.
Air Filter
Fan 3
Fan Case Unit (Fan 1)
Ballast C.B.A.
Air Filter
Air Filter
Fan 2
LCD Drive C.B.A.
Main C.B.A.
Front Jack C.B.A.
Power C.B.A.
Rear Jack C.B.A.
Card C.B.A.
Digital Tuner C.B.A.
Base C.B.A.
Rear Cover

TV Unit & Digital Tuner C.B.A.

SERVICE MODE

In this mode, the following information can be confirmed on the screen:

Service Mode (1/3)
- Current Lamp elapsed time
- The number of Lamp ON **(For reference only)**
- BKSV number read-out

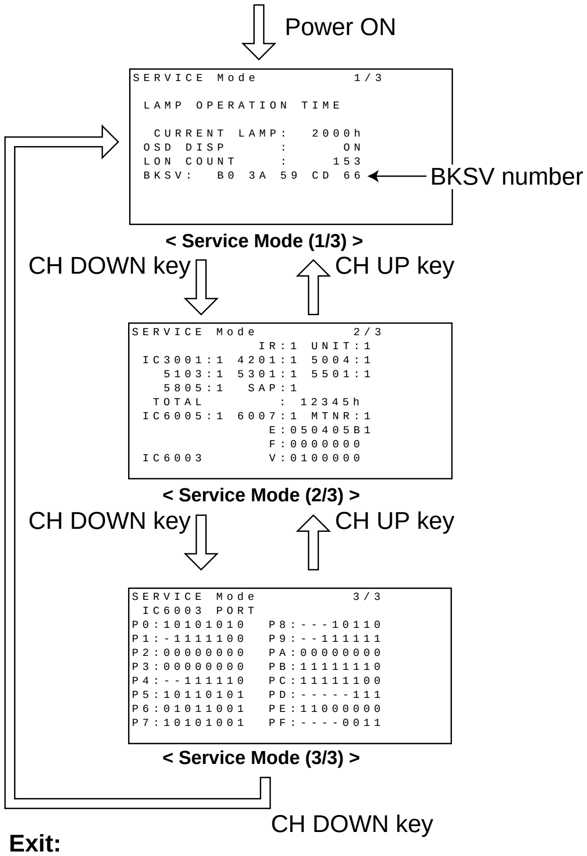
Service Mode (2/3)
- Key detection check
- Communication check for IIC bus on the Main C.B.A.
- Total Lamp elapsed time
- Communication check for IIC bus on the Main C.B.A.
- EEPROM IC6007 version and build version **(For reference only)**
- IC6003 software version and build version **(For reference only)**

Service Mode (3/3)
- IC6003 Port information

Note:
IC6003: Main Microcontroller on the Main C.B.A.

Service Mode Map

Enter :
VOLUME DOWN button + TV/VIDEO key
(on the front) (on the remote)
(for more than 5 seconds in power off condition)



```
SERVICE Mode          1/3

 LAMP OPERATION TIME

  CURRENT LAMP:   2000h
 OSD DISP      :     ON
 LON COUNT     :    153
 BKSV:   B0 3A 59 CD 66
```

< Service Mode (1/3) >

```
SERVICE Mode          2/3
            IR:1 UNIT:1
 IC3001:1 4201:1 5004:1
   5103:1 5301:1 5501:1
   5805:1  SAP:1
  TOTAL         : 12345h
 IC6005:1 6007:1 MTNR:1
             E:050405B1
             F:0000000
 IC6003      V:0100000
```

< Service Mode (2/3) >

```
SERVICE Mode          3/3
 IC6003 PORT
P0:10101010  P8:---10110
P1:-1111100  P9:--111111
P2:00000000  PA:00000000
P3:00000000  PB:11111110
P4:--111110  PC:11111100
P5:10110101  PD:-----111
P6:01011001  PE:11000000
P7:10101001  PF:----0011
```

< Service Mode (3/3) >

Exit:
Power OFF.
(When turning the power on again after once turning off, wait for approx. 10 seconds. Or, the unit can not be released from Service Mode.)

Fig. 1-1

1. Press and hold the VOLUME DOWN button on the unit and the TV/VIDEO key on the remote for more than 5 seconds in power off condition. The unit will go into Service Mode. Service Mode (1/3) will appear.

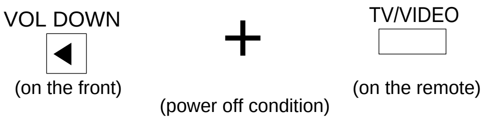
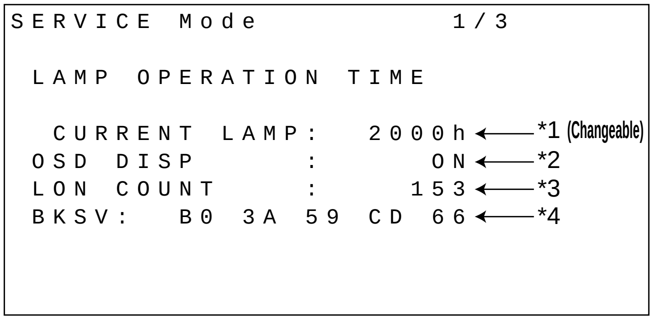


Fig. 1-2



```
SERVICE Mode              1/3

 LAMP OPERATION TIME

  CURRENT LAMP:   2000h ←—*1 (Changeable)
 OSD DISP       :     ON ←—*2
 LON COUNT      :    153 ←—*3
 BKSV:   B0 3A 59 CD 66 ←—*4
```

<Service Mode (1/3)>

Fig. 1-3

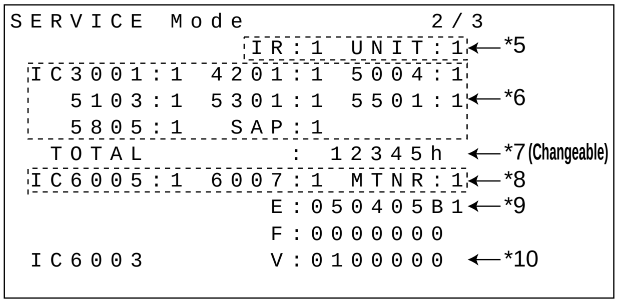
*1: The current elapsed "Lamp operation" time (in hours) **(changeable)**
Note:
"CURRENT LAMP" can be changed as follows:
Select "CURRENT LAMP" by pressing CH UP/DOWN key and press the OK key.
Then, press the VOLUME UP/DOWN key to change the value of *1.
To release, press the RECALL key.

*2: OSD Display ON/OFF mode **(Not used for service)**
Note:
Press the OK key to display OFF.
To release, press any key.

*3: The number of Lamp ON (limit 65535) **(For reference only)**
(When the Lamp time is reset, value of *3 will be "0")

*4: BKSV number read-out
IC5805 (HDMI IC) on the Main C.B.A. has its own number called BKSV and it is displayed.
Note:
To display BKSV number, refer to "HOW TO DISPLAY BKSV NUMBER."

2. Press the CH DOWN key. Service Mode (2/3) will appear.



```
SERVICE Mode               2/3
                IR:1 UNIT:1 ←—*5
 IC3001:1  4201:1  5004:1
    5103:1  5301:1  5501:1 ←—*6
    5805:1   SAP:1
  TOTAL          :  12345h ←—*7 (Changeable)
 IC6005:1  6007:1  MTNR:1 ←—*8
                 E:050405B1 ←—*9
                 F:0000000
 IC6003          V:0100000 ←—*10
```

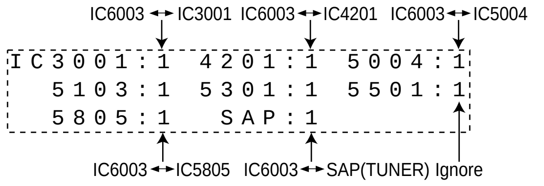
<Service Mode (2/3)>

Fig. 1-4-1

*5: Key detection (IR and Unit operation button) check
Note:
On the remote, first, press the TV key on the remote to go to TV mode. Then, press any operation key except POWER, LIGHT, CH UP/DOWN, REW, PLAY, FF, PAUSE, STOP, REC, TV/VCR or OPEN/CLOSE to detect if a key has been pressed. If a key has been detected by IC6003, "1" will change to "0."
On the unit, press any operation button except POWER to detect if a button has been pressed.
If a button has been detected by IC6003, "1" will change to "0."

*6: Communication check for IIC bus on the Main C.B.A.

(Communication check for I²C bus)



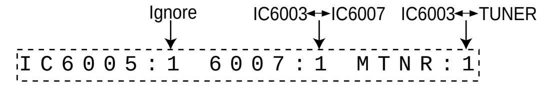
Explanation		Code No.
Communication check for I²C bus (IC6003↔IC3001(VIDEO SW))	**NG** **OK**	0 1
Communication check for I²C bus (IC6003↔IC4201(SOUND PROCESSOR))	**NG** **OK**	0 1
Communication check for I²C bus (IC6003↔IC5004(MAIN VIDEO SIGNAL PROCESS))	**NG** **OK**	0 1
Communication check for I²C bus (IC6003↔IC5103(SUB VIDEO SIGNAL PROCESS))	**NG** **OK**	0 1
Communication check for I²C bus (IC6003↔IC5301(VIDEO SIGNAL PROCESS))	**NG** **OK**	0 1
Communication check for I²C bus (IC6003↔IC5805(HDMI INTERFACE))	**NG** **OK**	0 1
Communication check for I²C bus (IC6003↔SAP (MTS/SAP SIGNAL PROCESS)) **Note:** SAP is included in TUNER which supplied as a unit.	**NG** **OK**	0 1

Fig. 1-4-2

*7: The total elapsed "Lamp operation" time (in hours) **(changeable) (For reference only)**
Note:
Even when changing the value of *1, it is not effective for the value of *7.

*8: Communication check for IIC bus on the Main C.B.A.

(Communication check for I²C bus)


Ignore
IC6003◄►IC6007
IC6003◄►TUNER

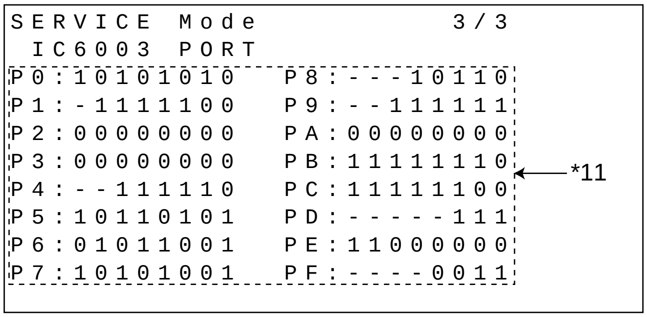
```
IC6005:1  6007:1  MTNR:1
```

Explanation		Code No.
Communication check for I²C bus (IC6003◄►IC6007(EEPROM))	**NG** **OK**	0 1
Communication check for I²C bus (IC6003◄►TUNER(ATSC DIGITAL TUNER))	**NG** **OK**	0 1

Fig. 1-4-3

*9: EEPROM IC6007 version and build version
*10: IC6003 software version and build version

2. Press the CH DOWN key. Service Mode (3/3) will appear.



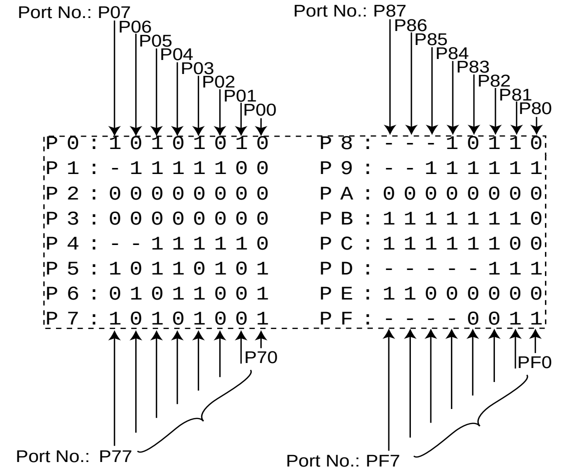
```
SERVICE Mode             3/3
 IC6003 PORT
P0:10101010   P8:---10110
P1:-1111100   P9:--111111
P2:00000000   PA:00000000
P3:00000000   PB:11111110  ←*11
P4:--111110   PC:11111100
P5:10110101   PD:-----111
P6:01011001   PE:11000000
P7:10101001   PF:----0011
```

<Service Mode (3/3)>

Fig. 1-5-1

*11 IC6003 Port information

IC6003 Port Information


Port No.: P07
P06
P05
P04
P03
P02
P01
P00
Port No.: P87
P86
P85
P84
P83
P82
P81
P80
P70
PF0
Port No.: P77
Port No.: PF7

```
P0:10101010   P8:---10110
P1:-1111100   P9:--111111
P2:00000000   PA:00000000
P3:00000000   PB:11111110
P4:--111110   PC:11111100
P5:10110101   PD:-----111
P6:01011001   PE:11000000
P7:10101001   PF:----0011
```

Note:

1. The above IC6003 Port information indication means:
   1: Hi, 0: Low, -: Port not used
   Refer to "I/O CHART OF IC6003."
2. There is a possibility that the IC6003 Port information indication (0 or 1) of some pins may not correspond to the actual signal condition. (Sampling cycle: approx. 500 msec.)

Fig. 1-5-2

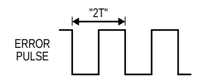
Note:
To release from any service mode, press the POWER button off.

I/O CHART OF IC6003

Pin No.	I/O	Port No.	Signal Name	Description
1	-	-	TSTMD1	(Not used)
2	-	P83	A20	(Not used)
3	O	P66	A07	ADDRESS 7
4	O	P65	A06	ADDRESS 6
5	O	P64	A05	ADDRESS 5
6	O	P63	A04	ADDRESS 4
7	O	P62	A03	ADDRESS 3
8	O	P61	A02	ADDRESS 2
9	O	P60	A01	ADDRESS 1
10	-	-	TEST	(Not used)
11	I	-	VDD	VDD (+3.3V)
12	I	-	RTCXI	32.768kHz OSCILLATION
13	O	-	RTCXO	32.768kHz OSCILLATION
14	-	-	VSS	GND
15	O	P45	HI0	STANDBY (L) / POWER ON (H)
16	O	P44	HI1	SCALER CS (L)
17	O	P43	VI0	DIGITAL TUNER OUTPUT (H) / NO OUTPUT (L)
18	O	P42	VI1	LAMP ON (H) / OFF (L)
19	I	P16	COVER_OPEN_H	LAMP COVER OPEN (H) / CLOSE (L)
20	O	P15	L_ON_H	LAMP ON / OFF CONTROL (ON (H) / OFF (L))
21	O	P14	STBY	STANDBY (L) / POWER ON (H)
22	I	P13	TM0IO	LAMP ERROR PULSE (ON (H) / OFF (L) / ERROR (PULSE)) ✻1
23	I/O	PC3	SDA0B	SERIAL DATA
24	O	PC2	SCL0B	SERIAL CLOCK
25	-	-	VSS	GND
26	-	P41	HCCLK0	(Not used)
27	O	P40	HCCLK1	HDMI HOT PLUG DETECT
28	I	-	VDD	VDD (+3.3V)
29	O	P37	BO4	OSD-B DATA 4
30	O	P36	BO3	OSD-B DATA 3
31	O	P35	BO2	OSD-B DATA 2
32	O	P34	BO1	OSD-B DATA 1
33	O	P33	BO0	OSD-B DATA 0
34	O	P32	GO5	OSD-G DATA 5
35	O	P31	GO4	OSD-G DATA 4
36	O	P30	GO3	OSD-G DATA 3
37	O	P27	GO2	OSD-G DATA 2
38	O	P26	GO1	OSD-G DATA 1
39	O	P25	GO0	OSD-G DATA 0
40	I	-	VDD	VDD (+3.3V)
41	-	-	VSS	GND
42	O	P24	RO4	OSD-R DATA 4
43	O	P23	RO3	OSD-R DATA 3
44	O	P22	RO2	OSD-R DATA 2
45	O	P21	RO1	OSD-R DATA 1
46	O	P20	RO0	OSD-R DATA 0
47	I	-	VDD	VDD (+3.3V)
48	I	-	OSDXI	OSD CLOCK
49	-	-	OSDXO	(Not used)
50	-	-	VSS	GND
51	O	P12	VSYNC	OSD V-SYNC
52	O	P11	YS	OSD-YS
53	O	P10	YM	OSD-YM
54	O	P07	HSYNC	OSD H-SYNC
55	O	PC1	SDA0A	HDMI AUDIO MUTE (H)
56	-	PC0	FA_3	(Not used)
57	-	P06	FA_2	(Not used)
58	I	P05	AL3	I^{2}C SERVICE (L)
59	O	P04	AL2	RESET (L)
60	O	P03	TEMP_LED_H	TEMP LED ON (H)
61	O	P02	LAMP_LED_H	LAMP LED ON (H)
62	O	P01	P_LED_R	POWER LED (RED) ON (L)
63	O	P00	P_LED_G	POWER LED (GREEN) ON (L)
64	-	-	AVSS	GND
65	I	-	AVDD2	VDD (+3.3V)
66	-	-	DT_IICON_H	(Not used)
67	O	-	HDMI1_L/S_H	HDMI 1 (L) / HDMI 2 (H)
68	O	-	RGB_L	RGB (L) / VIDEO (H)
69	O	-	HDMI_A_PD_L	HDMI AUDIO (IC5807) POWER DOWN (L)
70	-	-	COMP	(Not used)
71	I	-	VREF	V-REF FOR IC6003
72	-	-	IREF	(Not used)
73	-	-	AVSS	GND
74	I	-	CVBS1	MAIN COMPOSITE VIDEO
75	-	-	VREFHS1	(Not used)
76	-	-	CLL	(Not used)
77	I	-	AVDD1	VDD (+3.3V)
78	I	-	CVBS0	SAB COMPOSITE VIDEO
79	-	-	VREFHS0	(Not used)
80	-	-	CLH	(Not used)
81	-	-	PLLTST	(Not used)
82	I	-	AVDD1	VDD (+3.3V)
83	-	-	AVSS	GND
84	O	PC7	I2C_SCK_3.3V	I^{2}C SERIAL CLOCK 0
85	I/O	PC6	I2C_DATA_3.3V	I^{2}C SERIAL DATA 0
86	I	PF3	ERROR	KEY DATA 2
87	I	PF2	ZERO_X_DET	ZERO CROSS DETECT
88	I	PF1	HDMI_INT	MDMI INTERRUPT REQUEST
89	I	PF0	ATSC_INT	ATSC TUNER INTERRPT REQUEST
90	O	PE7	AMP_MUTE_L	AUDIO AMP MUTE (L)
91	O	PE6	LINE_MUTE_H	LINE AUDIO OUT MUTE (H)
92	-	PE5	FA_1	(Not used)
93	I	PE4	FILTER_DET	CLOGGED FILTER DETECT (A/D INPUT)
94	I-	PE3	M_AFT	MAIN TUNER AFC
95	I	PE2	KEY_IN2	LCD DRIVE ERROR INFORMATION ✻2
96	I	PE1	KEY_IN1	KEY DATA 1
97	I	PE0	KEY_IN0	KEY DATA 0
98	-	-	VSS	GND
99	O	-	OSC2	4MHz OSCILLATION
100	I	-	OSC1	4MHz OSCILLATION
101	I	-	VDD	VDD (+3.3V)
102	I	P57	IR_IN	IR DATA
103	O	P95	ATSC_SO	ATSC SERIAL DATA 0
104	I	P94	ATSC_SI	ATSC SERIAL DATA 1
105	I	P93	DTV_P_ON_H	DIGITAL TUNER POWER ON (H)
106	O	P92	SBO0	SERIAL DATA 0
107	I	P91	SBI0	SERIAL DATA 1
108	O	P90	SBT0	SERIAL CLOCK
109	-	P56	PWM3	(Not used)
110	O	P55	PWM2	H PHASE CONTROL
111	O	P54	PWM1	SD BOOT (H)
112	O	P53	PWM0	IC6009 CS (L)
113	O	-	PDS	POWER DOWM (L)
114	O	-	D_A_SW	DIGITAL TUNER (L) / ANALOG TUNER (H)
115	O	PD1	WDOUT	DIGITAL TUNER RESET (L)
116	O	PD0	SCL1	I^{2}C SERIAL CLOCK 1
117	I/O	PC5	SDA1	I^{2}C SERIAL DATA 1
118	-	PC4	CPUMD2	(Not used)
119	-	-	CPUMD1	(Not used)
120	-	-	CPUMD0	(Not used)
121	-	-	TSTMD0	(Not used)
122	O	P52	WE	IC6009 WRITE ENABLE (L)
123	O	P51	OE	IC6009 OUTPUT ENABLE (L)
124	I	-	VDD	VDD (+3.3V)
125	I	P50	/RST	RESET (L)
126	-	-	VSS	GND
127	I/O	PB7	D15	DATA 15
128	I/O	PB6	D14	DATA 14
129	I/O	PB5	D13	DATA 13
130	I/O	PB4	D12	DATA 12
131	I/O	PB3	D11	DATA 11
132	I/O	PB2	D10	DATA 10
133	I/O	PB1	D09	DATA 9
134	I/O	PB0	D08	DATA 8
135	I/O	PA7	D07	DATA 7
136	I/O	PA6	D06	DATA 6
137	I/O	PA5	D05	DATA 5
138	I/O	PA4	D04	DATA 4
139	-	-	VSS	GND
140	I	-	VDD	VDD (+3.3V)
141	I/O	PA3	D03	DATA 3
142	I/O	PA2	D02	DATA 2
143	I/O	PA1	D01	DATA 1
144	I/O	PA0	D00	DATA 0
145	-	P82	A19	(Not used)
146	O	P81	A18	ADDRESS 18
147	O	P80	A17	ADDRESS 17
148	O	P77	A16	ADDRESS 16
149	O	P76	A15	ADDRESS 15
150	O	P75	A14	ADDRESS 14
151	O	P74	A13	ADDRESS 13
152	O	P73	A12	ADDRESS 12
153	I	-	VDD	VDD (+3.3V)
154	-	-	VSS	GND
155	O	P72	A11	ADDRESS 11
156	O	P71	A10	ADDRESS 10
157	O	P70	A09	ADDRESS 9
158	O	P67	A08	ADDRESS 8
159	-	P84	A21	(Not used)
160	-	-	OSCMD0	(Not used)

*1

Pin 22	Lamp Status
H	Lamp On
ERROR 1 (T=128ms)	The Failure Of Lamp light up
ERROR 2 (T= 96ms)	Abnormal Lamp Voltage
ERROR 3 (T= 64ms)	Abnormal Temperature
ERROR 4 (T= 32ms)	Other Causes
L	Lamp Off



*2

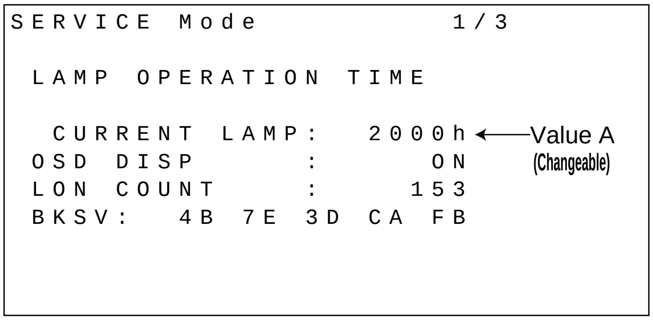
Pin 62	Pin 64	INPUT
L	L	DVI
L	H	——
H	L	RGB 1
H	H	HDMI

BEFORE REMOVING THE MAIN C.B.A. OR THE TV UNIT FROM THE UNIT AT THE USE'S LOCATION

Note:
The TV Unit includes the Main C.B.A.

CAUTION:

1. **Be sure to make a note of the CURRENT LAMP value (value A) in Service Mode (1/3):**



```
SERVICE Mode             1/3

 LAMP OPERATION TIME

  CURRENT LAMP:   2000h
 OSD DISP      :     ON
 LON COUNT     :    153
 BKSV:  4B 7E 3D CA FB
```

<Service Mode (1/3)>

Fig. 2

LAMP OPERATION TIME is stored in EEPROM on the Main C.B.A. Therefore, before removing the Main C.B.A. or the TV Unit at the user's location, make a note of the CURRENT LAMP value (value A) in Service Mode (1/3). Then, after installing the new Main C.B.A. or the TV Unit at the user's location, set the CURRENT LAMP value to the original value (value A) in Service Mode.
Otherwise, OSD and LED Lamp replacement indications will be displayed at the wrong time.

Note:
In case it is impossible to make a note of the CURRENT LAMP value because of a defective Main C.B.A., ask the customer their daily average use and the approximate age of the current Lamp. Then, calculate the CURRENT LAMP value as follows and make a note.

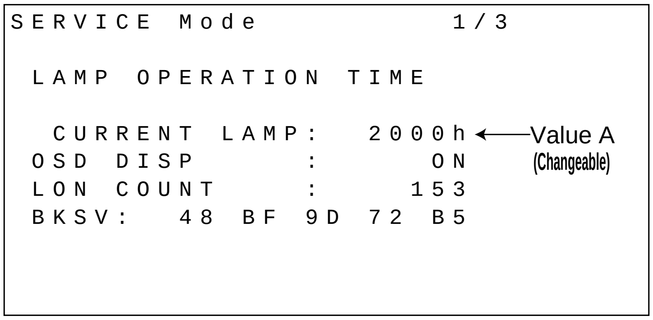
Daily average use (hours) X Approx. age (days) = **CURRENT LAMP** (hours)

Note:
The TOTAL value can be set to the original value in Service Mode (2/3) by similar method:
Before removing the Main C.B.A. at the user's location, make a note of the TOTAL value in Service Mode (2/3).
Then, after installing the new Main C.B.A. at the user's location, set the TOTAL value to the original value in Service Mode.

WHEN REINSTALLING THE MAIN C.B.A. OR THE TV UNIT INTO THE UNIT AT THE USER'S LOCATION

CAUTION:

1. Set CURRENT LAMP value to original value as follows.
   1) Select CURRENT LAMP in Service Mode (1/3).
   2) Press the VOLUME UP/DOWN key on the remote to change to the original value (value A) that was noted before removing the Main C.B.A. or the TV Unit at the user's location.



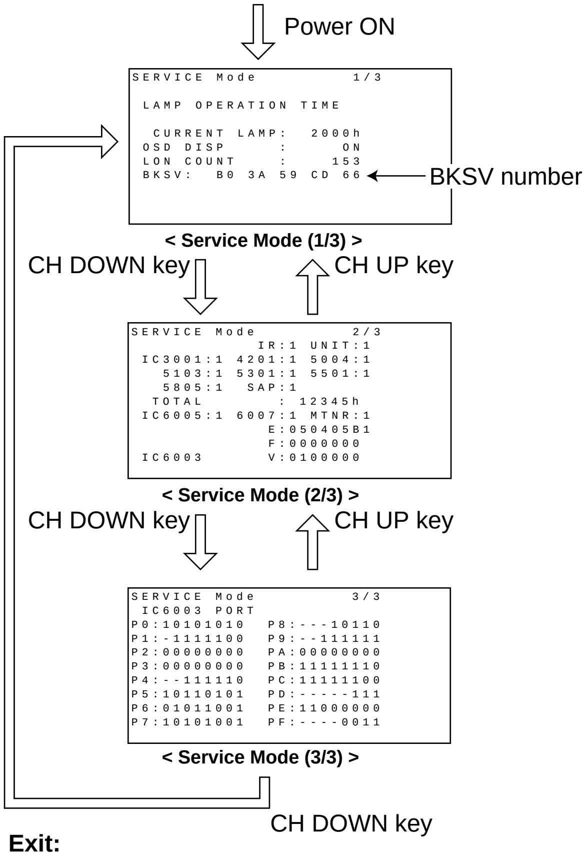
```
SERVICE Mode             1/3

 LAMP OPERATION TIME

  CURRENT LAMP:   2000h
 OSD DISP      :     ON
 LON COUNT     :    153
 BKSV:  48 BF 9D 72 B5
```

<Service Mode (1/3)>

Fig. 3

Service Mode Map

Enter :
VOLUME DOWN button + TV/VIDEO key
(on the front) (on the remote)
(for more than 5 seconds in power off condition)



```
SERVICE Mode             1/3

 LAMP OPERATION TIME

  CURRENT LAMP:   2000h
 OSD DISP      :     ON
 LON COUNT     :    153
 BKSV:  B0 3A 59 CD 66
```

< Service Mode (1/3) >

```
SERVICE Mode             2/3
            IR:1  UNIT:1
 IC3001:1 4201:1 5004:1
   5103:1 5301:1 5501:1
   5805:1  SAP:1
  TOTAL        : 12345h
 IC6005:1 6007:1 MTNR:1
             E:050405B1
             F:0000000
 IC6003      V:0100000
```

< Service Mode (2/3) >

```
SERVICE Mode             3/3
 IC6003 PORT
P0:10101010  P8:---10110
P1:-1111100  P9:--111111
P2:00000000  PA:00000000
P3:00000000  PB:11111110
P4:--111110  PC:11111100
P5:10110101  PD:-----111
P6:01011001  PE:11000000
P7:10101001  PF:----0011
```

< Service Mode (3/3) >

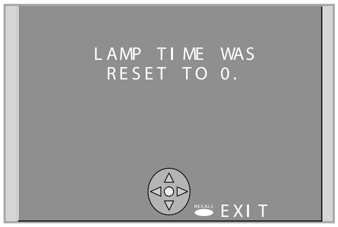
Exit:
Power OFF.
(When turning the power on again after once turning off, wait for approx. 10 seconds. Or, the unit can not be released from Service Mode.)

REPLACEMENT OF LAMP

Lamp Time Reset Procedure:

Be sure to reset the Lamp time to "0" after replacing the new Lamp.

1. Plug in the AC Cord, and turn on the power by pressing the POWER button.
2. Press and hold the VOLUME DOWN button on the unit and the SPLIT key on the remote together for over 5 seconds in power on condition.
   When the reset is finished, the display as shown in Fig. 5-1 appears and the LAMP LED goes out.

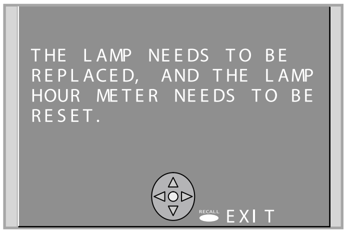


LAMP TIME WAS
RESET TO 0.

Fig. 5-1

Note:

1. The unit will detect when the Lamp's end of life is approaching and the following message will be displayed. And the LAMP indicator light will be lit when the Lamp's end of life is approaching.



THE LAMP NEEDS TO BE
REPLACED, AND THE LAMP
HOUR METER NEEDS TO BE
RESET.

Fig. 5-2

2. Influences of frequent lighting, continuous light use for over 24 hours, the number of times lit, the length of time between lightings, etc. may shorten lamp life. (Because of this, we recommend having a replacement lamp on hand.)

WARNING:

- The lamp could rupture if dropped and lamp fragments could cause injury.
- Because the lamp unit is hot immediately after its use, touching it may cause burns.
  Please allow the lamp to cool before handling or replacing the lamp unit.
- If replacement of the lamp unit becomes necessary during the operation of the Projection Display, follow the procedure to turn off the power and wait until the lamp unit cools completely.

Cautions for Lamp Unit Replacement:

- Do not disassemble the Lamp.
- The lamp may be hot. Be careful when handling. Wear gloves.
- Under no circumstance should you touch the actual bulb. At this high operating temperature the natural oil on your finger can cause the glass to weaken where touched and the bulb can crack or explode.

Lamp Replacement Procedure:

1. Press the POWER button to turn off the power.
2. Wait for about 1 minute until the cooling fan stops.
   Note:
   The lamp cooling fan will continue to operate for about 1 minute after the power is turned off. Do not unplug the AC Cord from the outlet until the fan has stopped. Avoid interrupting the power by using circuit breakers or switchable power strips.
3. After the cooling fan has stopped, unplug the AC Cord from the outlet.
   Note:
   Please wait more than one hour before replacing the lamp.
   [Forced cooling function]
   If you need to replace the lamp more urgently:
   - The Projection display has a forced cooling feature. After the POWER button is turned OFF, and during the first minute of the normal cooling fan operation, press the VOLUME UP button on the unit and CH UP key on the remote at the same time for more than 5 seconds. The cooling fan operates for about 10 minutes. (LAMP LED will flash 5 times every 5 second and POWER LED will flash red for 10 minutes.)
4. Remove the Front Cover Unit from the latches.
5. Turn the Knob to the left.

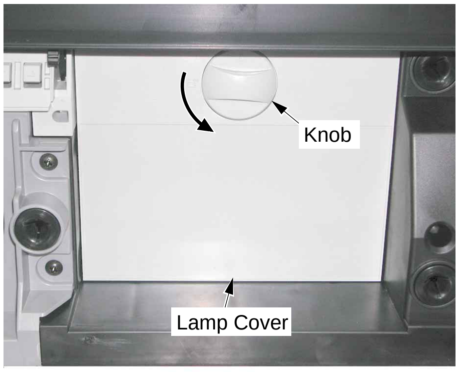


Fig. 5-3

6. Pull the Lamp Cover out.
7. Loosen the Screw on the Lamp. Then, pull the Lamp.
   Note:
   Because the Lamp may still be hot, use caution when handling.

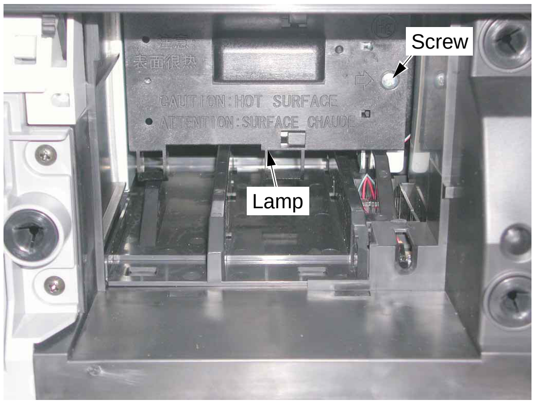


Fig. 5-4

8. Install the new Lamp, and tighten the Screw.
9. Install the Lamp Cover, and turn the Knob to the right.
10. Install the Front Cover Unit.

Note:

After replacing the Lamp, use caution to reset the Lamp time.

CLEANING METHOD

THE SCREEN UNIT AND THE MIRROR

- THE SCREEN UNIT (Lenticular Screen, Fresnel Lens)

It is strongly recommended that the Lenticular Screen surface (outside) and the Fresnel Lens surface (inside) should be wiped gently with a clean, soft, dry cloth to remove the dirt.

Note:

1. If the dirt cannot be removed by wiping with a clean, soft, dry cloth, use a clean, soft, dry cloth moistened with diluted neutral pH liquid cleanser or a lens cleaner (usually containing a small amount of ethyl alcohol) and wipe lightly. Take care not to leave any streaks.
   Do not use cleaning materials containing methyl alcohol, acetone, or dichloromethane.
2. Use an air blower to clean the inner surface of the Lenticular Screen and the outer surface of the Fresnel Lens (the surfaces that one another). These surfaces must not be wiped with a cloth.

- THE MIRROR

Remove any dirt with an air blower or wipe with a clean, soft, dry cloth. If wiped too forcefully, the surface of the Mirror can be damaged. If wiping with a clean, dry cloth does not remove the dirt, the Mirror must be replaced.

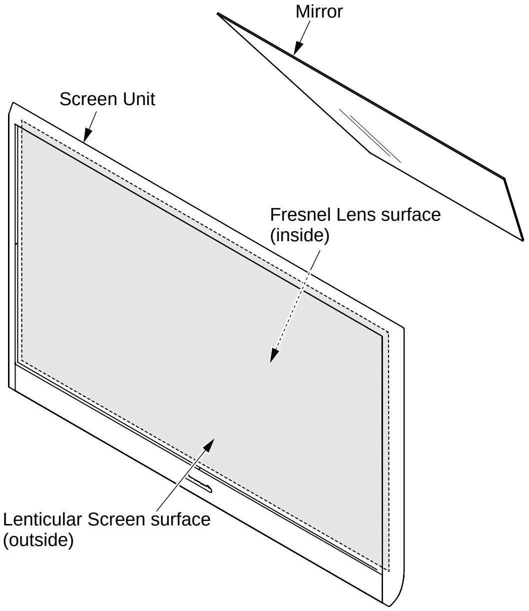

Mirror
Screen Unit
Fresnel Lens surface (inside)
Lenticular Screen surface (outside)

Fig. 6-1

THE LAMP

Gently wipe the surface of the glass of the Lamp with cleaning paper or soft cloth.

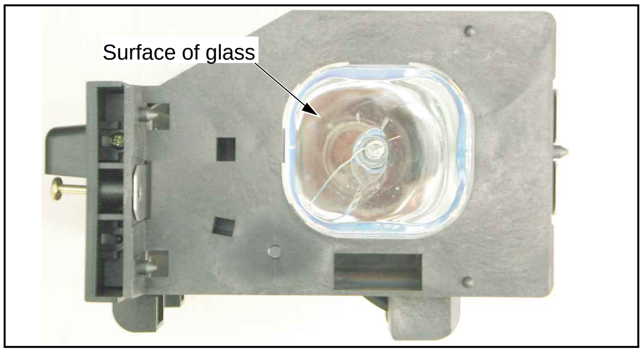


Fig. 6-2

THE FILTER ON THE PROJECTION UNIT

CAUTION:

Operating with torn or damaged Air Filter may cause damage to the Projection unit.
Remove the Projection Unit from rear. Then, clean the filters on the Projection Unit. Gently remove any accumulated dust from filter with a vacuum cleaner.

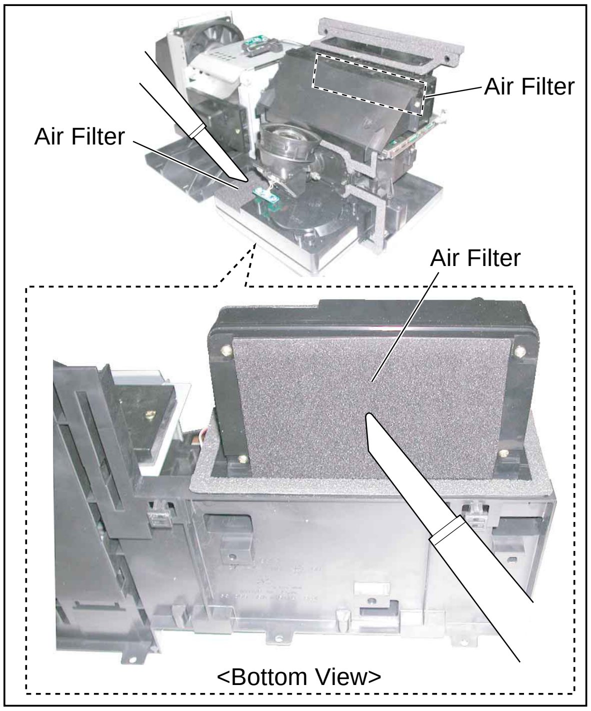


Fig. 6-3

THE PROJECTION LENS

Use lens cleaning paper and cleaner available at your local camera shop, etc. Dampen the cleaning paper with cleaner and gently wipe the surface of the lens from the center outward to remove dust.

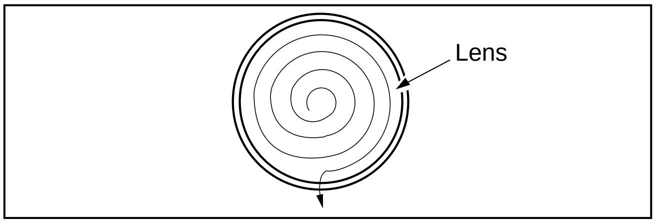


Fig. 6-4

THE POLARIZER UNIT, THE FIELD LENS, THE RELAY LENS, THE CONDENSER LENS, THE DICHROIC MIRROR, THE FULL MIRRORS, THE INTEGRATOR AND THE P/S CONVERTER

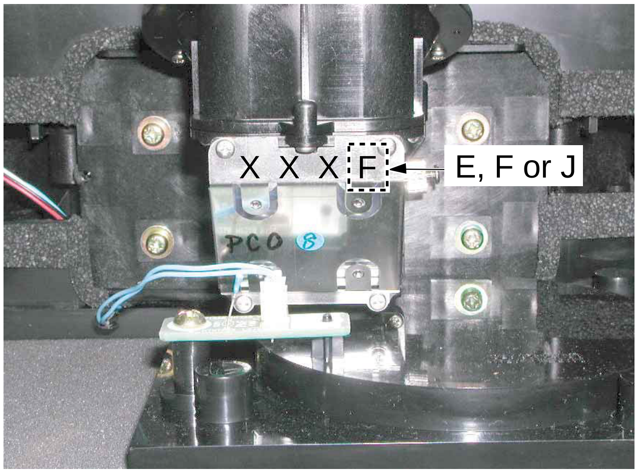
Make sure that no dust gets on the optical components such as the Polarizer Unit, the Field Lens, the Relay Lens, the Condenser Lens, the Dichroic Mirror, the Full Mirrors, the Integrator and the P/S Converter. Clean these optical components with cleaning paper moistened with pure ethyl alcohol or a lens cleaner which contains no water or oil.

THE LCD PANEL OF THE LCD/PRISM UNIT

1) Clean the surface of the LCD Panel of the LCD/Prism Unit with an air blower or wipe with a clean, or soft blush lightly.
2) If any dirt remains, lightly wipe the surface with a cotton swab moistened with pure ethyl alcohol or a lens cleaner which contains no water or oil. Use a new swab after each wiping so that dirt will not be re-deposited on the surface.

TO DISTINGUISH THE PROJECTION LENS UNIT OR THE PROJECTION UNIT

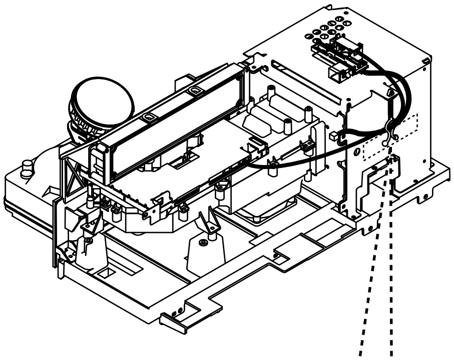
The only difference between the 44 inch model, the 52 inch model and the 61 inch model of the Projection Unit is the Projection Lens. To distinguish, see marking (E, F or J) on the Projection Lens.



<Front View>

E with red: for 44 inch model
F with black: for 52 inch model
J with blue: for 61 inch model

And also, see the stamp on the Lamp Wall of the Projection Unit.

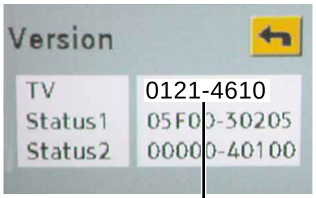


Stamp

44"LSXA0625	: for 44 inch model
52"LSXA0626	: for 52 inch model
61"LSXA0699	: for 61 inch model

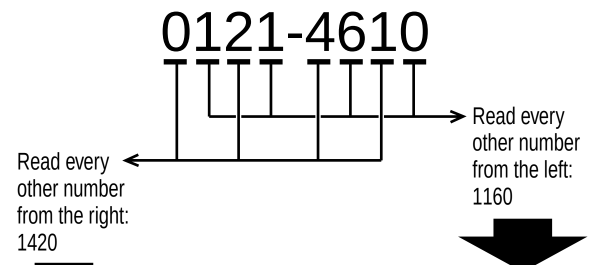
TO READ THE DIGITAL TUNER (PEAKS) SOFTWARE VERSION AND TV MICROCONTROLLER SOFTWARE VERSION

1. Press MENU key with the power on.
2. Press CH UP/DOWN key and select "Setup."
   Then press OK key.
3. Press CH UP/DOWN key and select "About."
   Then press OK key.
4. Select "Version" and press OK key.
   Version menu will appear as shown below.
   Starting with the second digit from the right or from the left.



Version

TV	0121-4610
Status1	05F00-30205
Status2	00000-40100


0121-4610
Read every other number from the right: 1420
Read every other number from the left: 1160

TV Microcontroller software Ver. : 1.160

Digital Tuner (Peaks) software Ver. : 1.420

WARNING

In case of failure of Digital Tuner, it is required by law to return the defective board to
PANASONIC CANADA INC.
5770 AMBLER DRIVE
MISSISSAUGA ONTARIO
L4W-2T3.

RESET USER’S MEMORY FUNCTIONS

Be sure to reset the user’s memory:

- After replacing the Digital Tuner C.B.A.
- If the secret code of V-chip is forgotten.
- When moving the unit to a new location.

1. Turn on the power.
2. Press and hold the VOLUME DOWN button on the unit and the OK key on the remote for more than 3 seconds. When reset is finished, power shuts off automatically (the user’s memory is reset).

CLOGGED AIR FILTER DETECTION

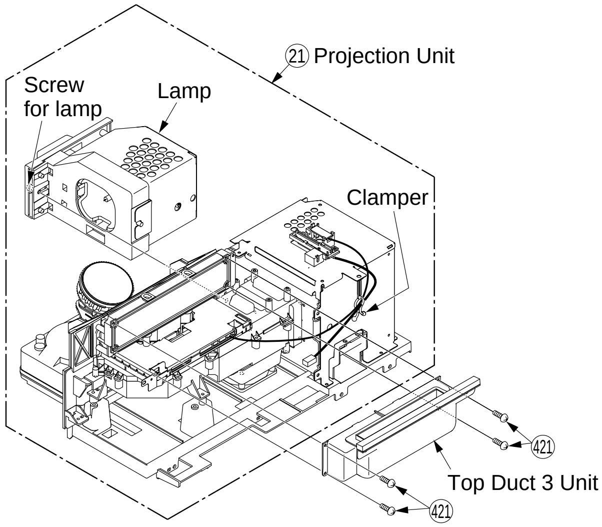
When a dirty or clogged air filter is detected, the OSD display appears for 1 minute. And then the Lamp is turned OFF. When this OSD display appears, remove the Projection Unit from rear, and clean the air filters gently on the Projection Unit.

AIR FILTER CLEANING
IS RECOMMANDED AT THIS
TIME. FIRST TURN THE
UNIT OFF.
PLEASE CALL FOR
SERVICE.

UNIT WILL BE TURNED
OFF AFTER 1 MINUTE.

BEFORE REMOVING THE PROJECTION UNIT FROM THE UNIT AT THE USER’S LOCATION

When removing the Projection Unit, remove the Lamp and the Top Duct 3 Unit from the Projection Unit and keep them. Then, reinstall this Lamp and the Top Duct 3 Unit into the new Projection Unit.



DO NOT UNPLUG AC CORD DURING COOLING OPERATION

The lamp cooling fan will continue to operate for approximately 1 minute after the power is turned off.
At the same time, the POWER LED will flash red.
Do not disconnect the AC Cord from the power outlet and do not open any circuit breakers while the cooling fan is still operating.

HOT CIRCUIT

Primary circuit exists on the Ballast C.B.A. and the Power C.B.A.
This circuit is identified as "**HOT**" on the C.B.A. and in the Service Manual. Use extreme care to prevent accidental shock when servicing.

MODEL NO. IDENTIFICATION MARK

Use Marks shown in the chart below to distinguish the different models included in this Service Manual.

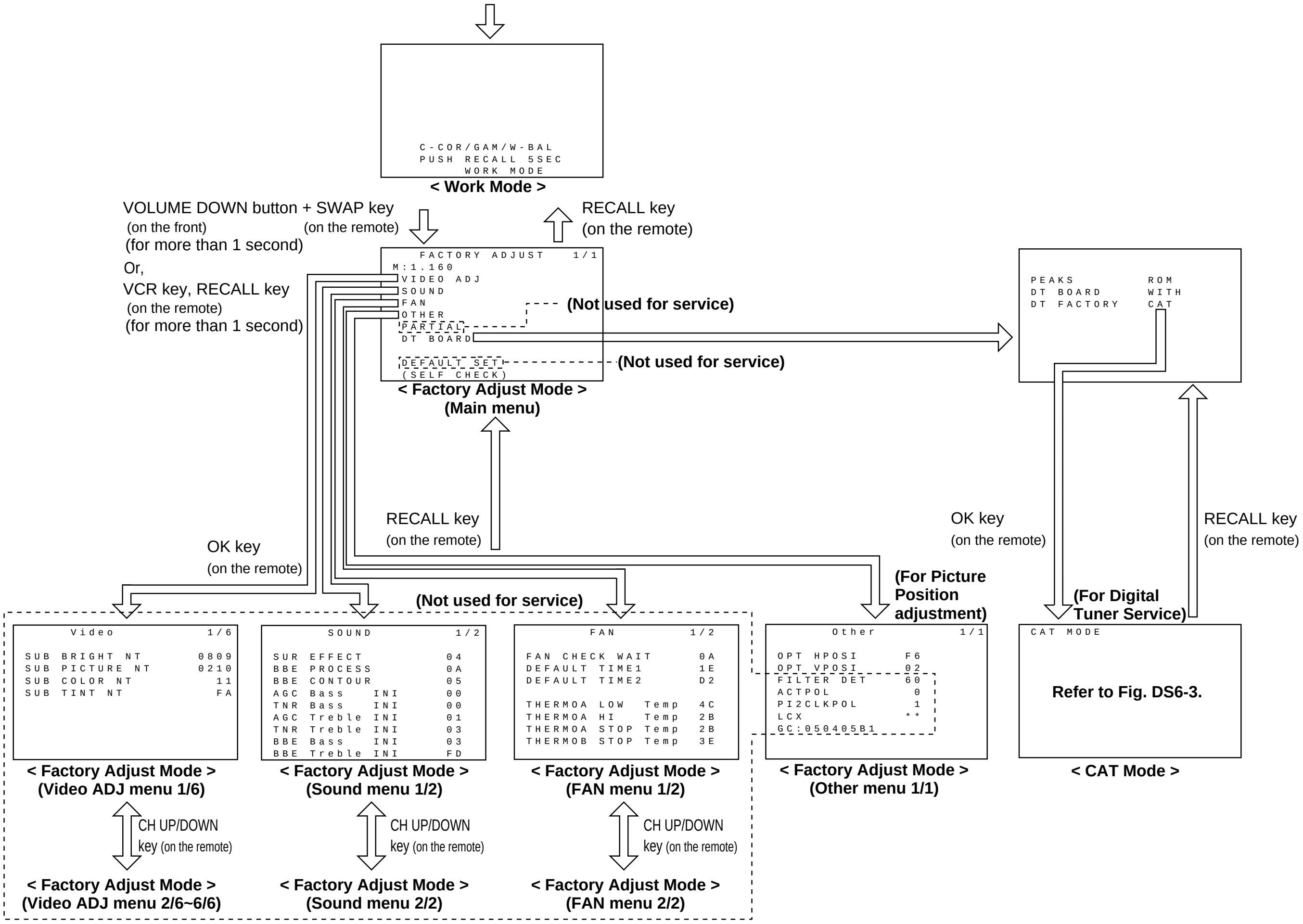
MODEL	MARK
PT-44LCX65-K	A
PT-52LCX65-K	B
PT-61LCX65-K	C
NOT USED	PT

Note:
Refer to Item 3 of Schematic Diagram Notes of Schematic Diagram and Circuit Board Layout Notes, for mark "PT."

WORK MODE, FACTORY ADJUST MODE, CAT MODE

Work Mode Map

Enter:
VOLUME DOWN button + RECALL key
(on the front) (on the remote)
(for more than 5 seconds in power on condition)


C-COR/GAM/W-BAL
PUSH RECALL 5SEC
WORK MODE
< Work Mode >
VOLUME DOWN button + SWAP key
(on the front) (on the remote)
(for more than 1 second)
Or,
VCR key, RECALL key
(on the remote)
(for more than 1 second)
RECALL key
(on the remote)
FACTORY ADJUST 1/1
M:1.160
VIDEO ADJ
SOUND
FAN
OTHER
PARTIAL
DT BOARD
DEFAULT SET
(SELF CHECK)
(Not used for service)
(Not used for service)
< Factory Adjust Mode >
(Main menu)
PEAKS ROM
DT BOARD WITH
DT FACTORY CAT
RECALL key
(on the remote)
OK key
(on the remote)
OK key
(on the remote)
RECALL key
(on the remote)
(For Picture
Position
adjustment)
(For Digital
Tuner Service)
(Not used for service)
Video 1/6
SUB BRIGHT NT 0809
SUB PICTURE NT 0210
SUB COLOR NT 11
SUB TINT NT FA
SOUND 1/2
SUR EFFECT 04
BBE PROCESS 0A
BBE CONTOUR 05
AGC Bass INI 00
TNR Bass INI 00
AGC Treble INI 01
TNR Treble INI 03
BBE Bass INI 03
BBE Treble INI FD
FAN 1/2
FAN CHECK WAIT 0A
DEFAULT TIME1 1E
DEFAULT TIME2 D2
THERMOA LOW Temp 4C
THERMOA HI Temp 2B
THERMOA STOP Temp 2B
THERMOB STOP Temp 3E
Other 1/1
OPT HPOSI F6
OPT VPOSI 02
FILTER DET 60
ACTPOL 0
PI2CLKPOL 1
LCX **
GC:050405B1
CAT MODE
Refer to Fig. DS6-3.
< Factory Adjust Mode >
(Video ADJ menu 1/6)
< Factory Adjust Mode >
(Sound menu 1/2)
< Factory Adjust Mode >
(FAN menu 1/2)
< Factory Adjust Mode >
(Other menu 1/1)
< CAT Mode >
CH UP/DOWN
key (on the remote)
CH UP/DOWN
key (on the remote)
CH UP/DOWN
key (on the remote)
< Factory Adjust Mode >
(Video ADJ menu 2/6~6/6)
< Factory Adjust Mode >
(Sound menu 2/2)
< Factory Adjust Mode >
(FAN menu 2/2)

Exit:
VOLUME DOWN button + RECALL key
(on the front) (on the remote)
(for more than 5 seconds in Work Mode)
Alternatively, Power OFF

Fig. 8

Factory Adjust Mode

This mode is required when:

- Performing Mechanical Picture Position, Focus and Electrical Picture Position adjustment (Other menu).

To enter the Factory Adjust Mode:

1) In Work Mode, press and hold the VOLUME DOWN button on the unit and the SWAP key on the remote together for more than 1 second. The unit will go into Factory Adjust Mode. ("FACTORY ADJUST" will appear on the screen.)
2) Press CH UP/DOWN key to select and press the OK key to set the item to be adjusted.
3) **After completing adjustments, press RECALL key twice to return to Work Mode.**
Then the adjustment data will be written to the EEPROM IC (IC6006/IC6007) on the Main C.B.A.

Note:
Do not unplug the AC Cord in Factory Adjust Mode or the adjustment data will not be written to the EEPROM IC.

HOW TO DISPLAY BKSV NUMBER

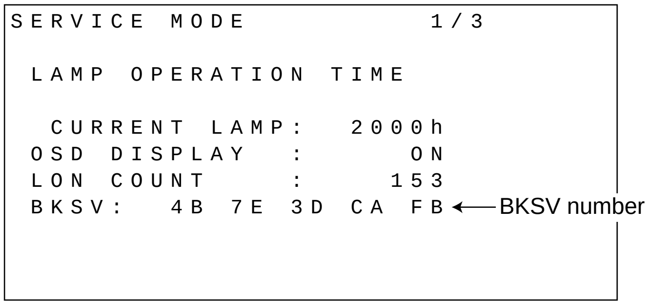
CAUTION:
Whenever IC5805 is replaced, record the BKSV number in the BKSV list along with the serial number of the set.

BKSV list (example)

Date	Serial number	BKSV number
4/15/2005	H4AA50050	B03A59CD66

To display the BKSV number:

1) Press the TV/VIDEO key on the remote to select the HDMI input in power on condition. Then, turn off the power.
2) Enter the Service Mode.
3) Connect the HDMI interface to the HDMI input terminal.
   Note:
   When using the DVI interface, a DVI-HDMI conversion cable (e.g., TY-SCH03DH: sold by Panasonic) can be used.
4) Input signal from the HDMI interface. Then, the BKSV number will be displayed and switched to new one.



```
SERVICE MODE            1/3

 LAMP OPERATION TIME

  CURRENT LAMP:   2000h
 OSD DISPLAY  :      ON
 LON COUNT    :     153
 BKSV:   4B 7E 3D CA FB
```

BKSV number

<Service Mode (1/3)>

CAUTION:
The BKSV number will not be displayed correctly if no signal has been input.
Therefore, be sure that you are reading the new number that was switched to with the input signal in power on condition.
Be sure to record the BKSV number in the BKSV list after switching, and ignore the BKSV number displayed before switching.

WIRE AND LEAD POSITION DIAGRAM OF THE UNIT

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

Note: Use extreme care especially for the following.

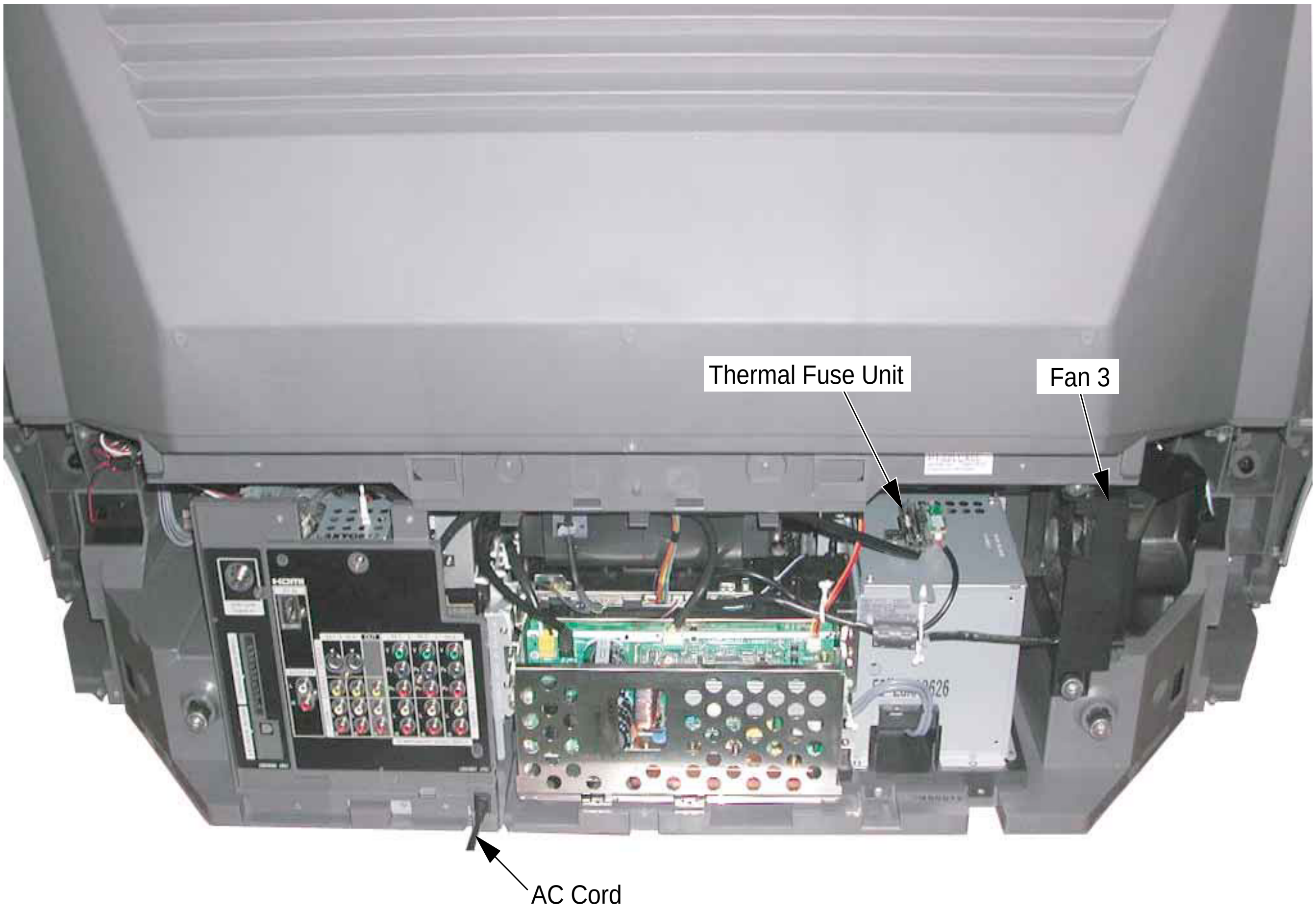


Fig. 9-1

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

Note: Use extreme care especially for the following.

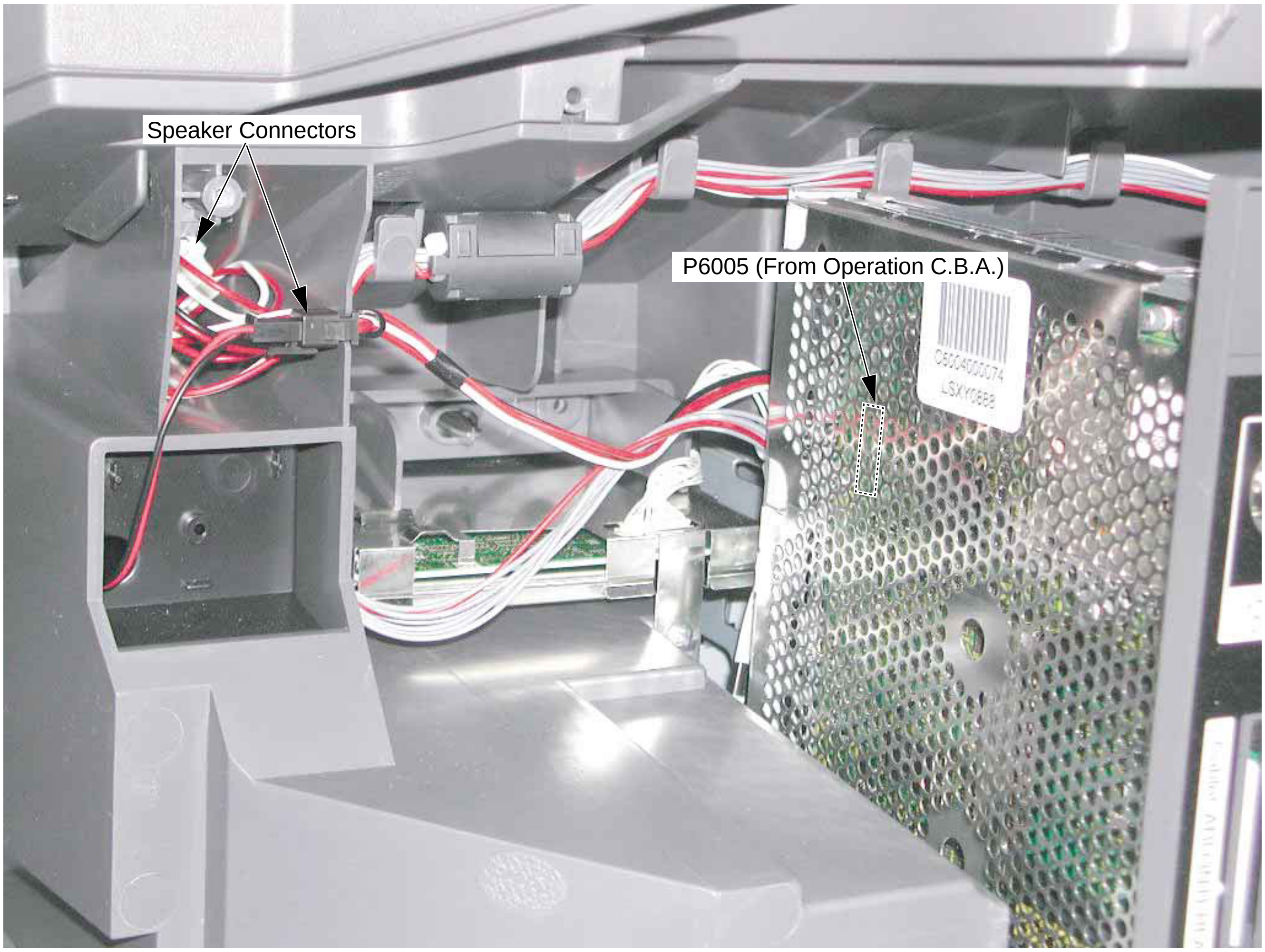

Speaker Connectors
P6005 (From Operation C.B.A.)
C6004000074
LSXY0688

Fig. 9-2

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.
Note: Use extreme care especially for the following.

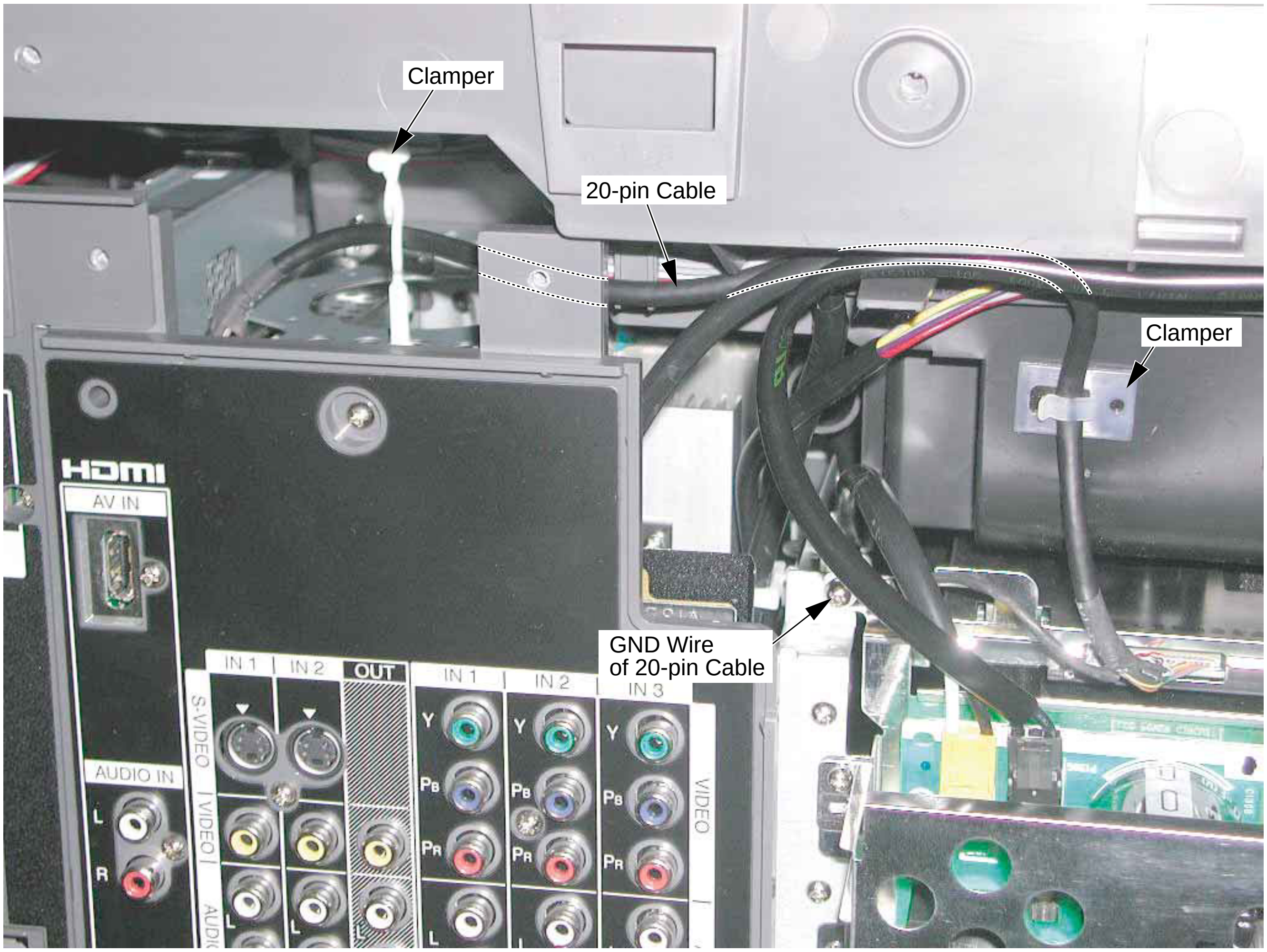

Clamper
20-pin Cable
Clamper
GND Wire
of 20-pin Cable
HDMI
AV IN
AUDIO IN
L
R
S-VIDEO
VIDEO
AUDIO
IN 1
IN 2
OUT
IN 1
IN 2
IN 3
Y
PB
PR
L

Fig. 9-3

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

Note: Use extreme care especially for the following.

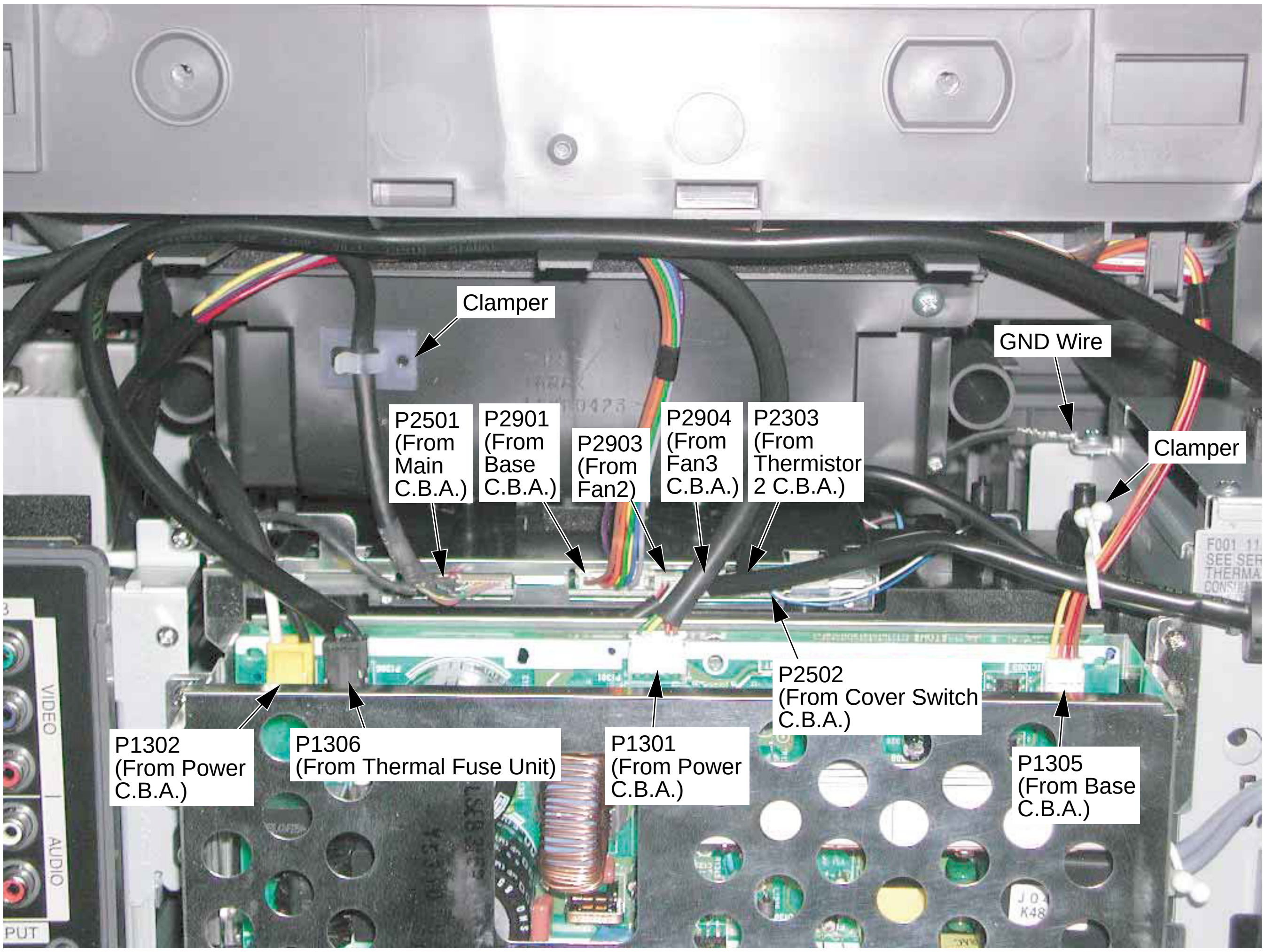

Clamper
GND Wire
P2501 (From Main C.B.A.)
P2901 (From Base C.B.A.)
P2903 (From Fan2)
P2904 (From Fan3 C.B.A.)
P2303 (From Thermistor 2 C.B.A.)
Clamper
P2502 (From Cover Switch C.B.A.)
P1302 (From Power C.B.A.)
P1306 (From Thermal Fuse Unit)
P1301 (From Power C.B.A.)
P1305 (From Base C.B.A.)

Fig. 9-4

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

Note: Use extreme care especially for the following.

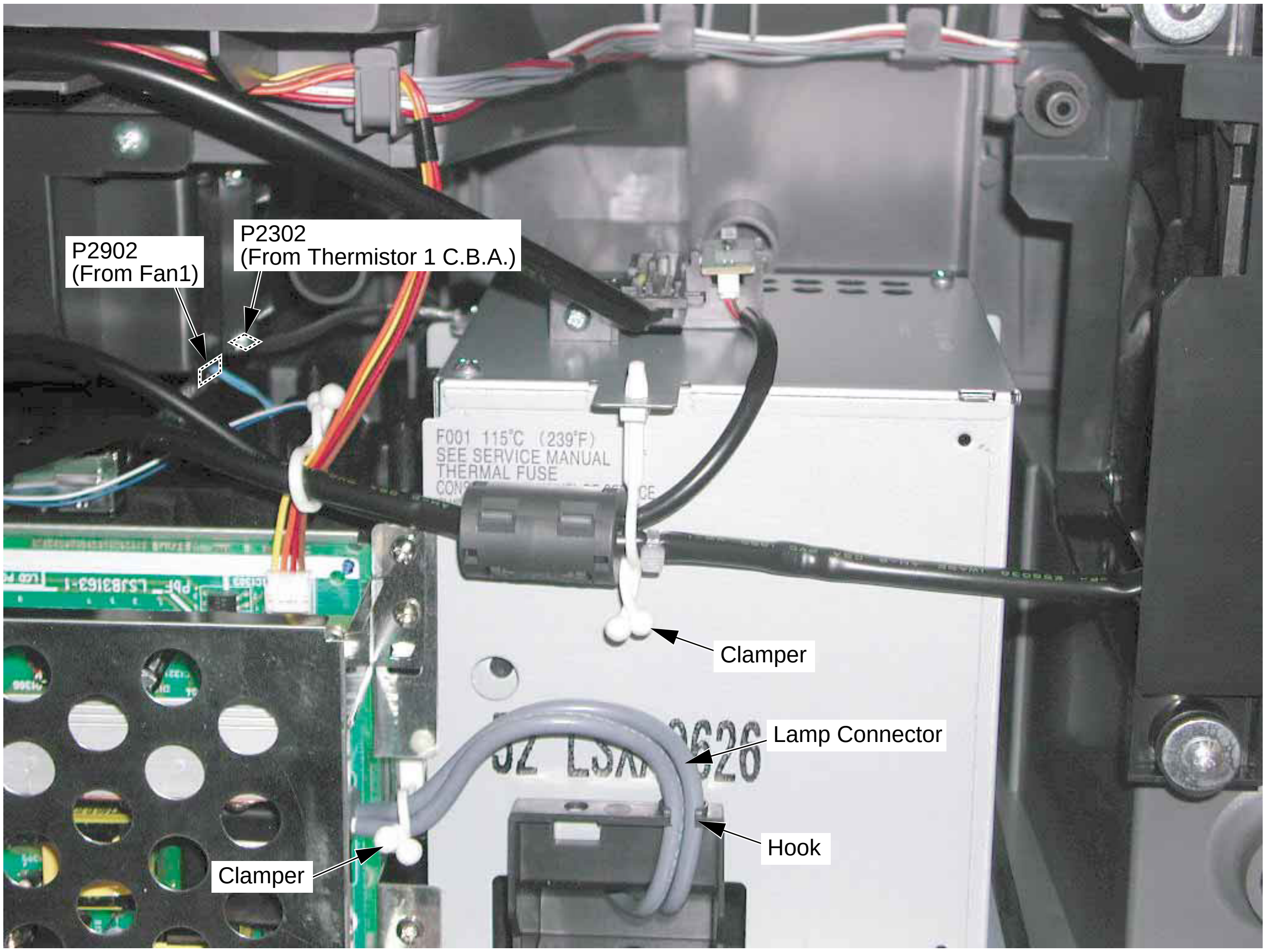

P2902
(From Fan1)
P2302
(From Thermistor 1 C.B.A.)
F001 115°C (239°F)
SEE SERVICE MANUAL
THERMAL FUSE
Clamper
Lamp Connector
Hook
Clamper

Fig. 9-5

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

Note: Use extreme care especially for the following.

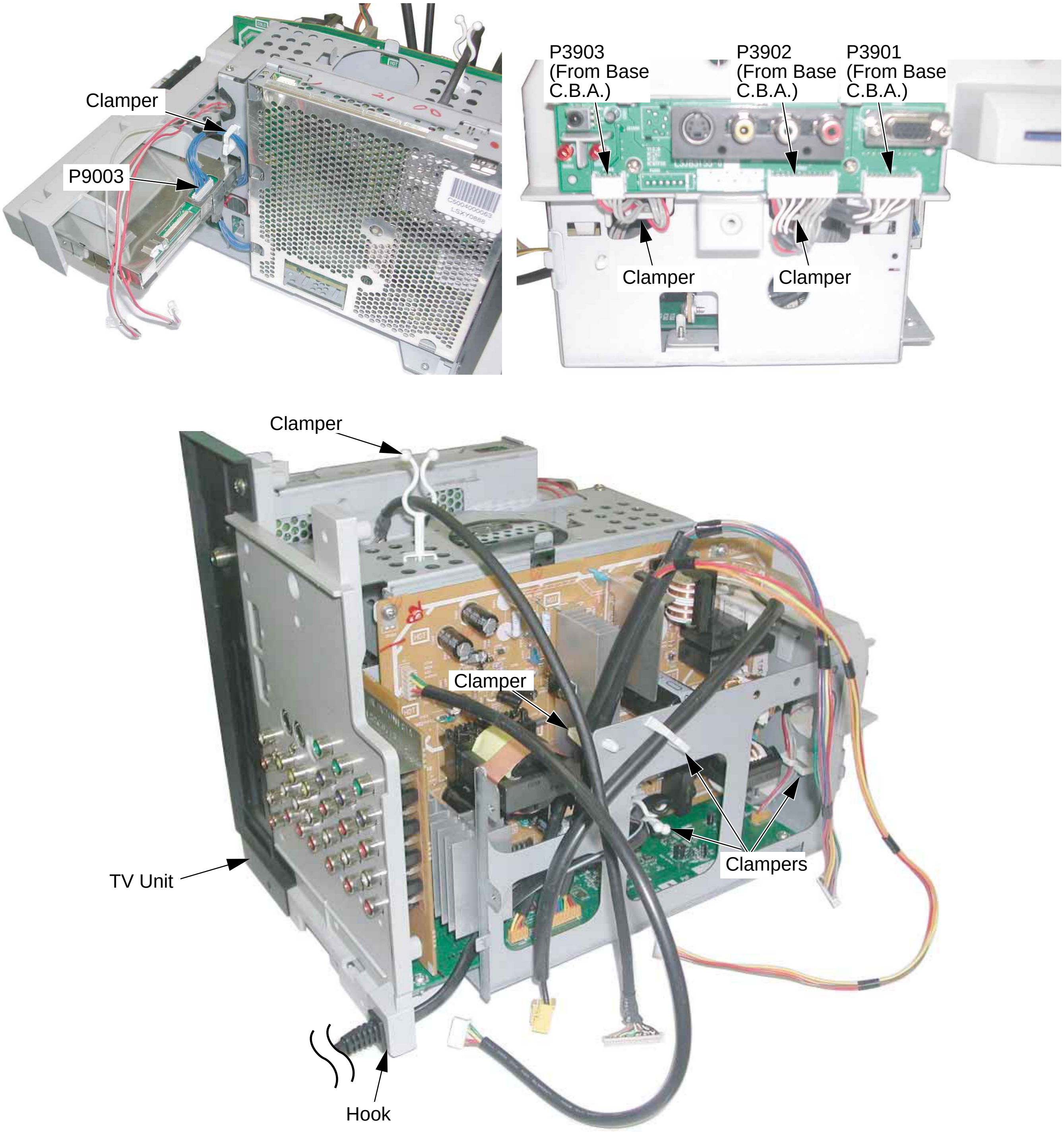

Clamper
P9003
P3903
(From Base
C.B.A.)
P3902
(From Base
C.B.A.)
P3901
(From Base
C.B.A.)
Clamper
Clamper
Clamper
Clamper
Clampers
TV Unit
Hook

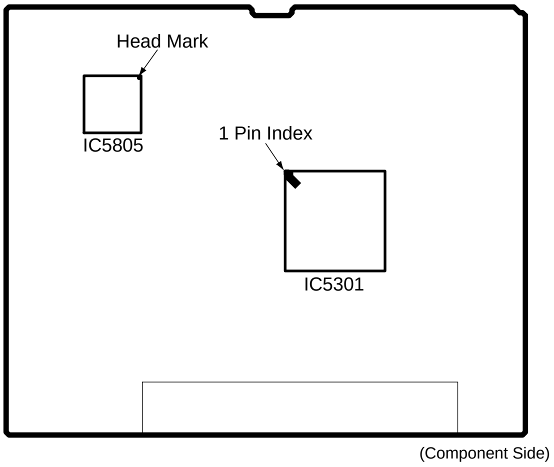
Fig. 9-6

IC INFORMATION

IC2001, IC2002, IC2003, IC2505, IC5301, IC5805 LOCATION

Make sure to install IC in the correct position on the CBA as shown.

Main C.B.A.


Head Mark
IC5805
1 Pin Index
IC5301
(Component Side)

LCD Drive C.B.A.

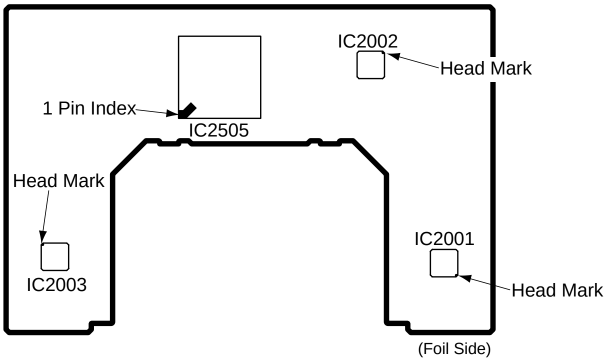
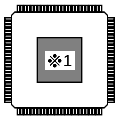

IC2002
Head Mark
1 Pin Index
IC2505
Head Mark
IC2003
IC2001
Head Mark
(Foil Side)

Fig. 10-1

- IC2001, IC2002, IC2003 on the LCD Drive C.B.A.

The area as indicated with ※1 is connected with the LCD Drive C.B.A. with solder for conductive heat sink.



<Bottom View>

(IC Removal hint)
- Use the Blower (heat up) from the top to remove.

(IC Installation hint)
- Solder the ※1 area of IC.
  If can not solder, make the solder remained on PC board where ※1 area is connected with as flat as possible.

TEMPERATURE PROFILE FOR HEAT RESISTANCEOF THIS IC

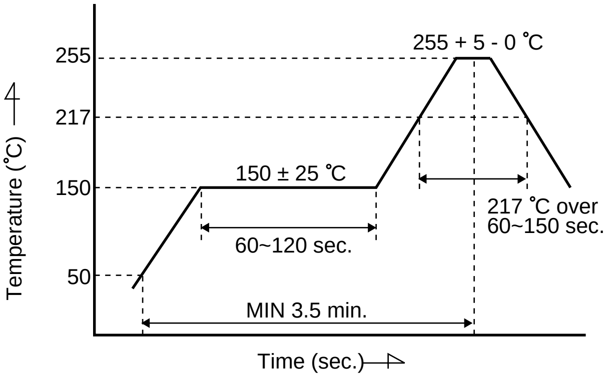
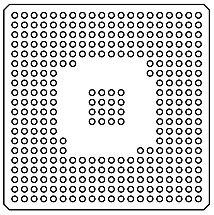


Fig. 10-2

- IC2505 (CSP IC) on the LCD Drive C.B.A.



<Bottom View>

TEMPERATURE PROFILE FOR HEAT RESISTANCEOF THIS IC

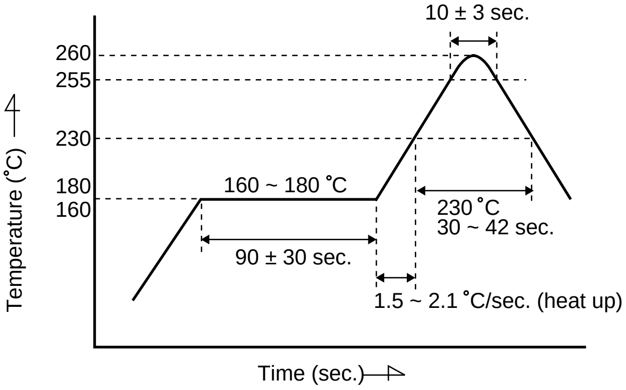
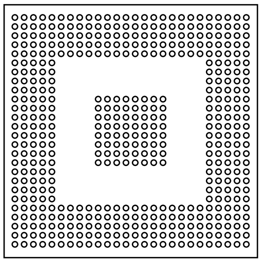


Fig. 10-3

- IC5301 (CSP IC) on the Main C.B.A.



<Bottom View>

TEMPERATURE PROFILE FOR HEAT RESISTANCEOF THIS IC

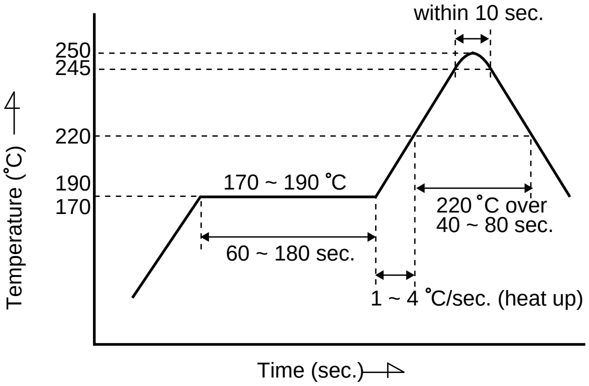
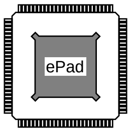


Fig. 10-4

- IC5805 on the Main C.B.A.

The ePad of this IC, located on the bottom of the IC, is connected on the Main C.B.A. with solder.



<Bottom View>

(IC Removal hint)
- Use the Blower (heat up) from the top to remove.

Note:
This IC (HDMI IC) which was removed must be disposed of.

(IC Installation hint)
- It is necessary to connect the ePad erea with the solder.

TEMPERATURE PROFILE FOR HEAT RESISTANCEOF THIS IC

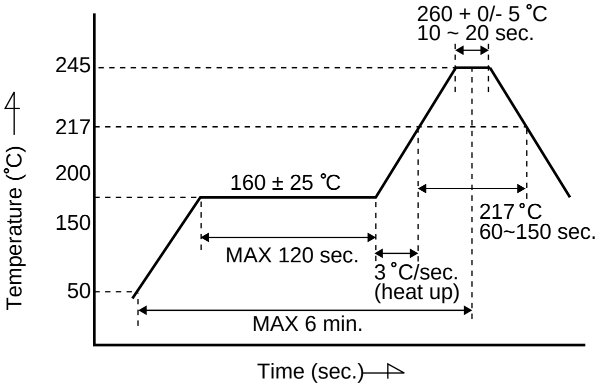


Fig. 10-5

5 SERVICE POSITION

Service Position	Purpose
Service Position (1)	Main C.B.A. check Front Jack C.B.A., Rear Jack C.B.A., Power C.B.A., Main C.B.A., Base C.B.A. check
Service Position (2)	LCD Drive C.B.A. check
Service Position (3)	Polarizer Adjustment of Projection Unit
Service Position (4)	Ballast C.B.A. check

SERVICE POSITION (1)

MAIN C.B.A. CHECK

It is possible to check the Main C.B.A. and also to check the Front Jack C.B.A., the Rear Jack C.B.A. the Power C.B.A., the Main C.B.A. and the Base C.B.A. by using the Monitor P.C.B. and the Converter P.C.B. without connecting the Projection Unit and the Ballast C.B.A.

The following service tool is required:
- Monitor P.C.B. (LSEP3102A)
- Converter P.C.B. (LSEP3164A)
- Signal Extension Cable (LSUA0037)
- Extension Cable 8P (LSUA0054)

The following equipment is required:
- XGA Color PC Monitor
- D-Sub 15 Pin RGB Cable (for connecting the Monitor P.C.B.)
- PC (2) for Test Pattern Signal
- D-Sub 15 Pin RGB Cable (for connecting the PC Input Terminal)

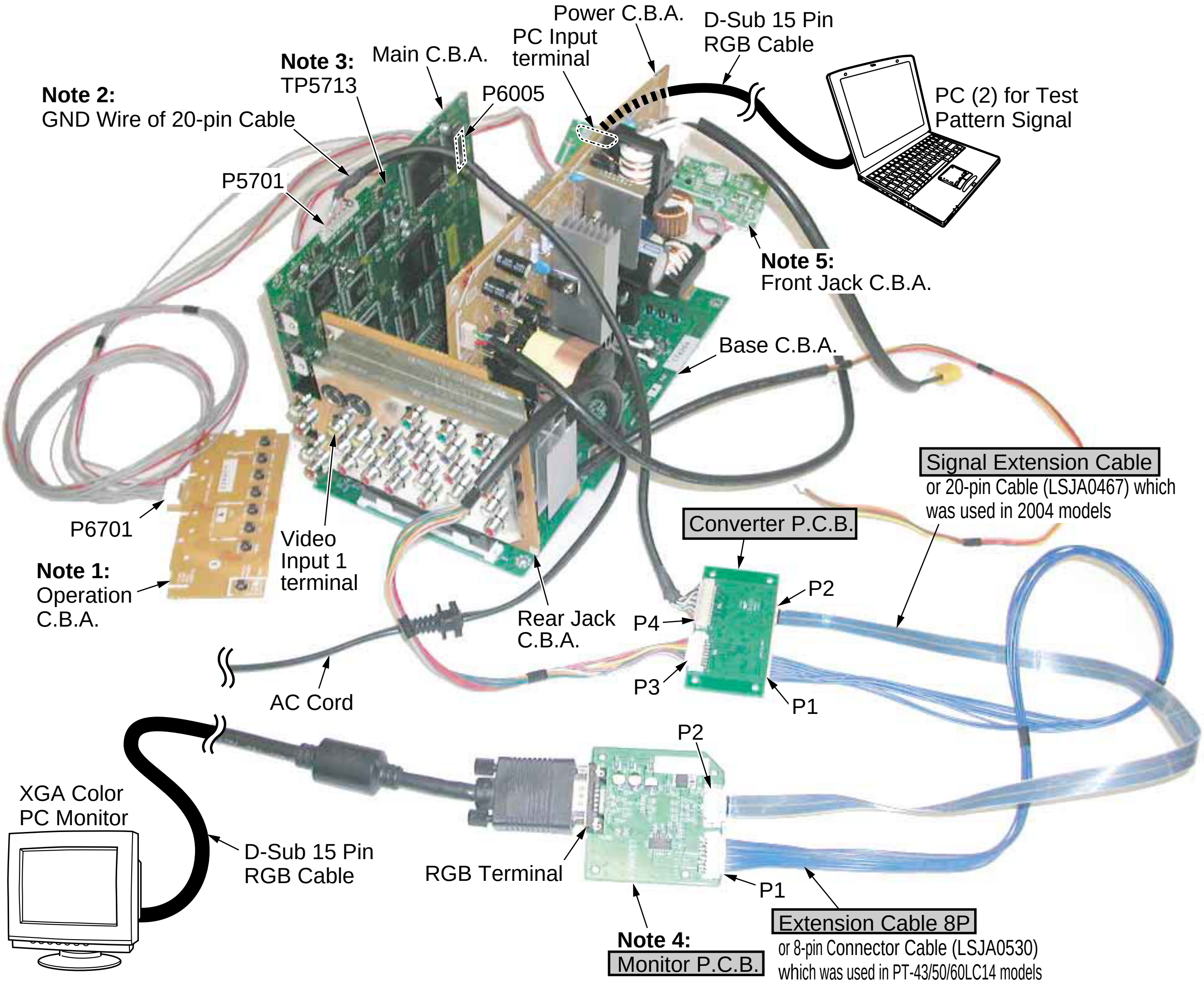

Power C.B.A.
D-Sub 15 Pin RGB Cable
PC Input terminal
Main C.B.A.
Note 3: TP5713
P6005
Note 2: GND Wire of 20-pin Cable
PC (2) for Test Pattern Signal
P5701
Note 5: Front Jack C.B.A.
Base C.B.A.
Signal Extension Cable
or 20-pin Cable (LSJA0467) which was used in 2004 models
Converter P.C.B.
P6701
Video Input 1 terminal
Note 1: Operation C.B.A.
P2
Rear Jack C.B.A.
P4
P3
P1
AC Cord
P2
XGA Color PC Monitor
D-Sub 15 Pin RGB Cable
RGB Terminal
P1
Note 4:
Monitor P.C.B.
Extension Cable 8P
or 8-pin Connector Cable (LSJA0530) which was used in PT-43/50/60LC14 models

Fig. S1-1

Note for Service Position (1):

1. In this Position, check and service **must be done in the Work Mode** without the Digital Tuner C.B.A. installed.
   Also, after Work Mode is entered, wait approx. 10 seconds until operation stabilizes.

Work Mode Map

Enter:
VOLUME DOWN button + RECALL key
(on the front) (on the remote)
(for more than 5 seconds in power on condition)

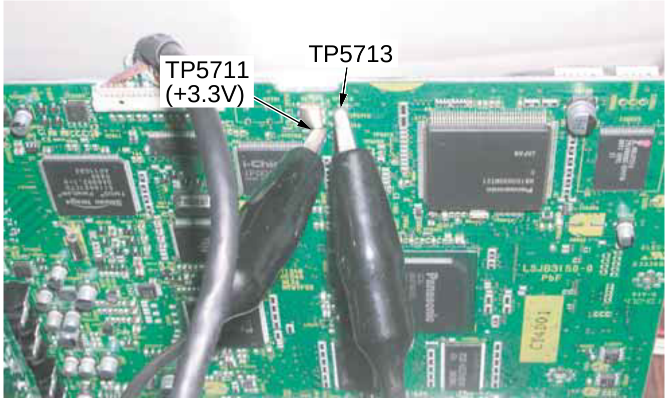
⇩

C-COR/GAM/W-BAL
PUSH RECALL 5SEC
WORK MODE

< Work Mode >

Exit:
VOLUME DOWN button + RECALL key
(on the front) (on the remote)
(for more than 5 seconds in Work Mode)
Alternatively, Power OFF

2. It is not necessary to connect the GND Wire of the 20-pin Cable when servicing.
3. To reduce the jitter noise on the XGA Color PC Monitor in this Service Position, connect the Clip to TP5713 and TP5711 (+3.3.V) on the Main C.B.A.



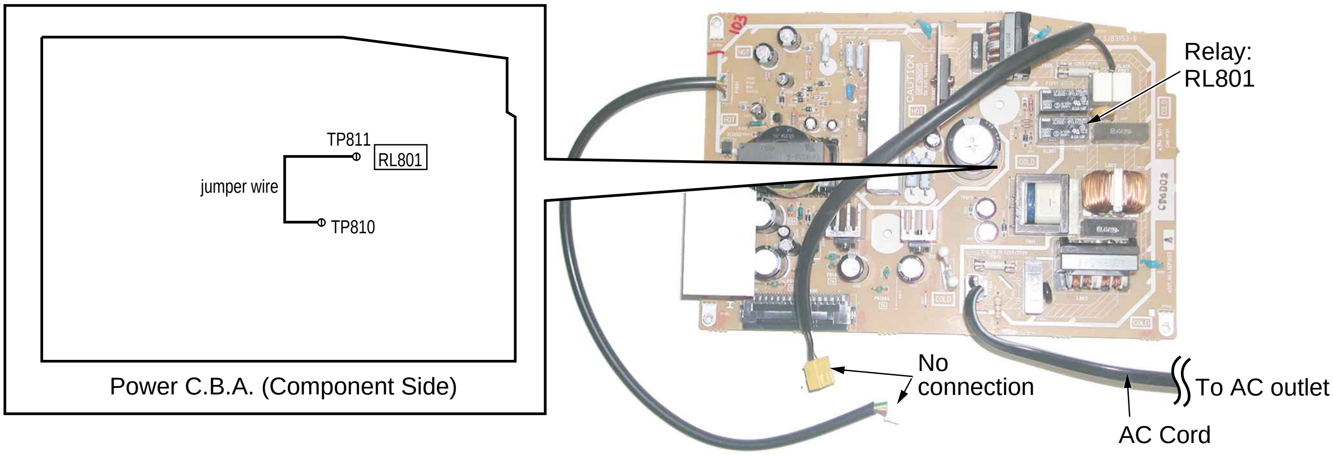
Main C.B.A. (Component Side)

Fig. S1-2

4. Any error detect functions such as Fan stop, temperature, etc. are defeated on the Monitor P.C.B.
5. When changing the input mode, point a remote at IR receiver on the Front Jack C.B.A.

POWER C.B.A. CHECK

It is possible to check the Power C.B.A. only with no load.


TP811
RL801
jumper wire
TP810
Power C.B.A. (Component Side)
Relay:
RL801
No
connection
To AC outlet
AC Cord

<Power C.B.A.>

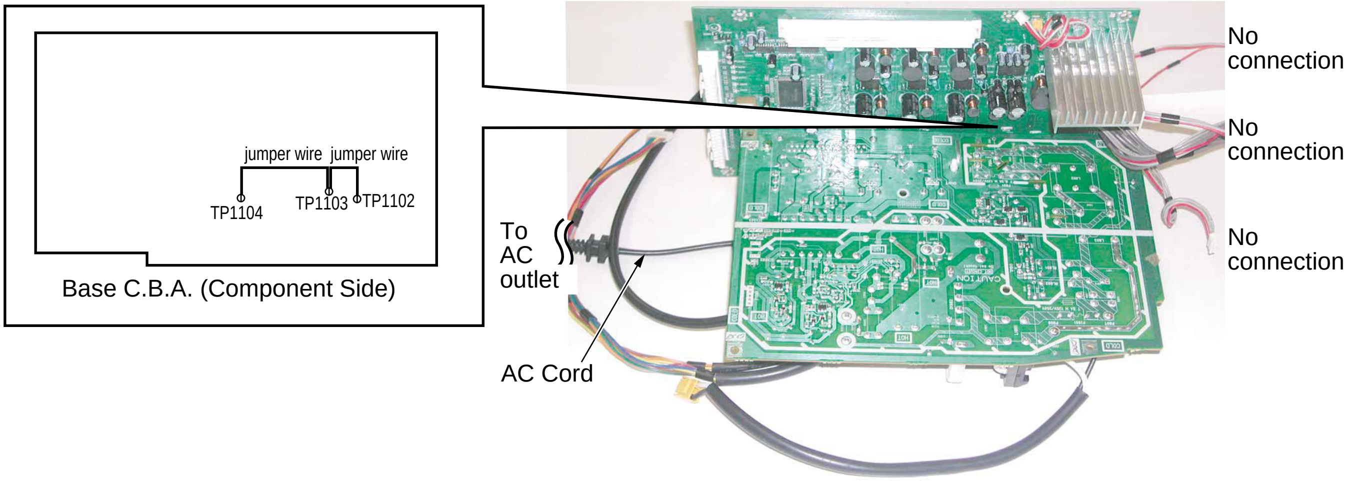
Fig. S1-4

Refer to "CHECKING THE POWER C.B.A." in "TROUBLESHOOTING HINTS FOR COMPONENT LEVEL REPAIR."

Note:
To turn on the relay (RL801), connect a jumper between TP810 and TP811 by soldering. Then, plug in AC Cord (snap sound).

POWER C.B.A. AND BASE C.B.A. CHECK

It is possible to check the Power C.B.A. and the Base C.B.A. only with no load.


jumper wire
jumper wire
TP1104
TP1103
TP1102
Base C.B.A. (Component Side)
To
AC
outlet
AC Cord
No
connection
No
connection
No
connection

<Power C.B.A. & Base C.B.A.>

Fig. S1-5

Refer to "CHECKING THE TV UNIT" in "TROUBLESHOOTING HINTS FOR COMPONENT LEVEL REPAIR."

SERVICE POSITION (2)
LCD DRIVE C.B.A. CHECK

It is possible to check the LCD Drive C.B.A. without connecting the Projection Unit and the Ballast C.B.A.

The following service tools are required:
- Cover Switch Defeat Cable (LSUA0041)

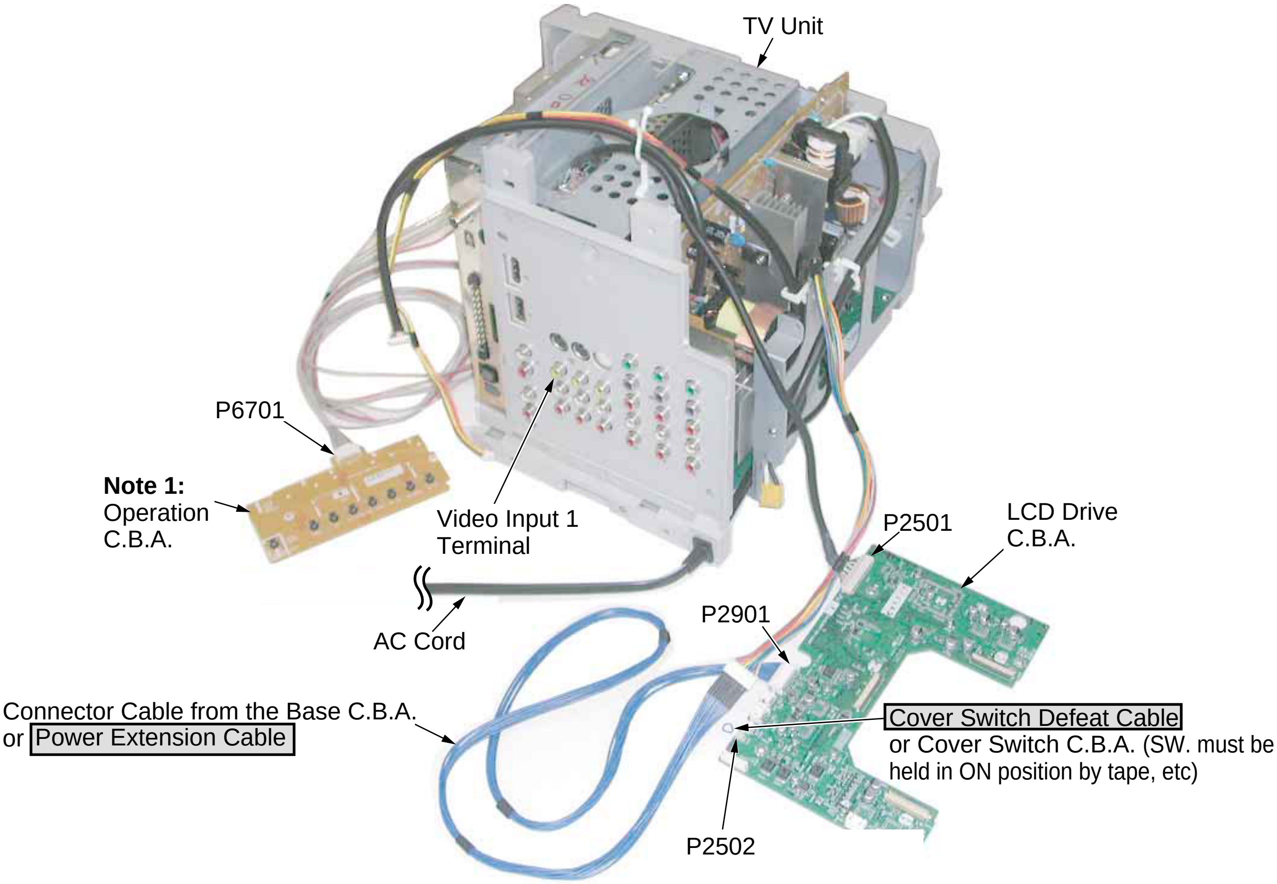

TV Unit
P6701
Note 1:
Operation C.B.A.
Video Input 1 Terminal
P2501
LCD Drive C.B.A.
P2901
AC Cord
Connector Cable from the Base C.B.A.
or Power Extension Cable
Cover Switch Defeat Cable
or Cover Switch C.B.A. (SW. must be held in ON position by tape, etc)
P2502

Fig. S2-1

Alternative method:
Connect the same Extension Cables (service tools) as 2004 models and check it in normal mode.

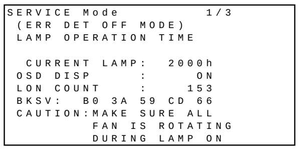
Note for Service Position (2):

1. Set to a desired input mode with the TV/VIDEO key before servicing. Then, be sure to enter the **ERR DET OFF MODE** to defeat any error detect functions.

CAUTION:
Do not install the Ballast C.B.A. in this mode.

Enter :
VOLUME DOWN button + ASPECT key
(on the front) (on the remote)
(for more than 5 seconds in power off condition)

⇩ Power ON



```
SERVICE Mode         1/3
 (ERR DET OFF MODE)
 LAMP OPERATION TIME

  CURRENT LAMP:  2000h
 OSD DISP     :     ON
 LON COUNT    :    153
 BKSV:  B0 3A 59 CD 66
 CAUTION:MAKE SURE ALL
         FAN IS ROTATING
         DURING LAMP ON
```

<ERR DET OFF MODE>

Exit : Power off.

SERVICE POSITION (3)

FULL MIRROR ADJUSTMENT & POLARIZER ADJUSTMENT OF PROJECTION UNIT

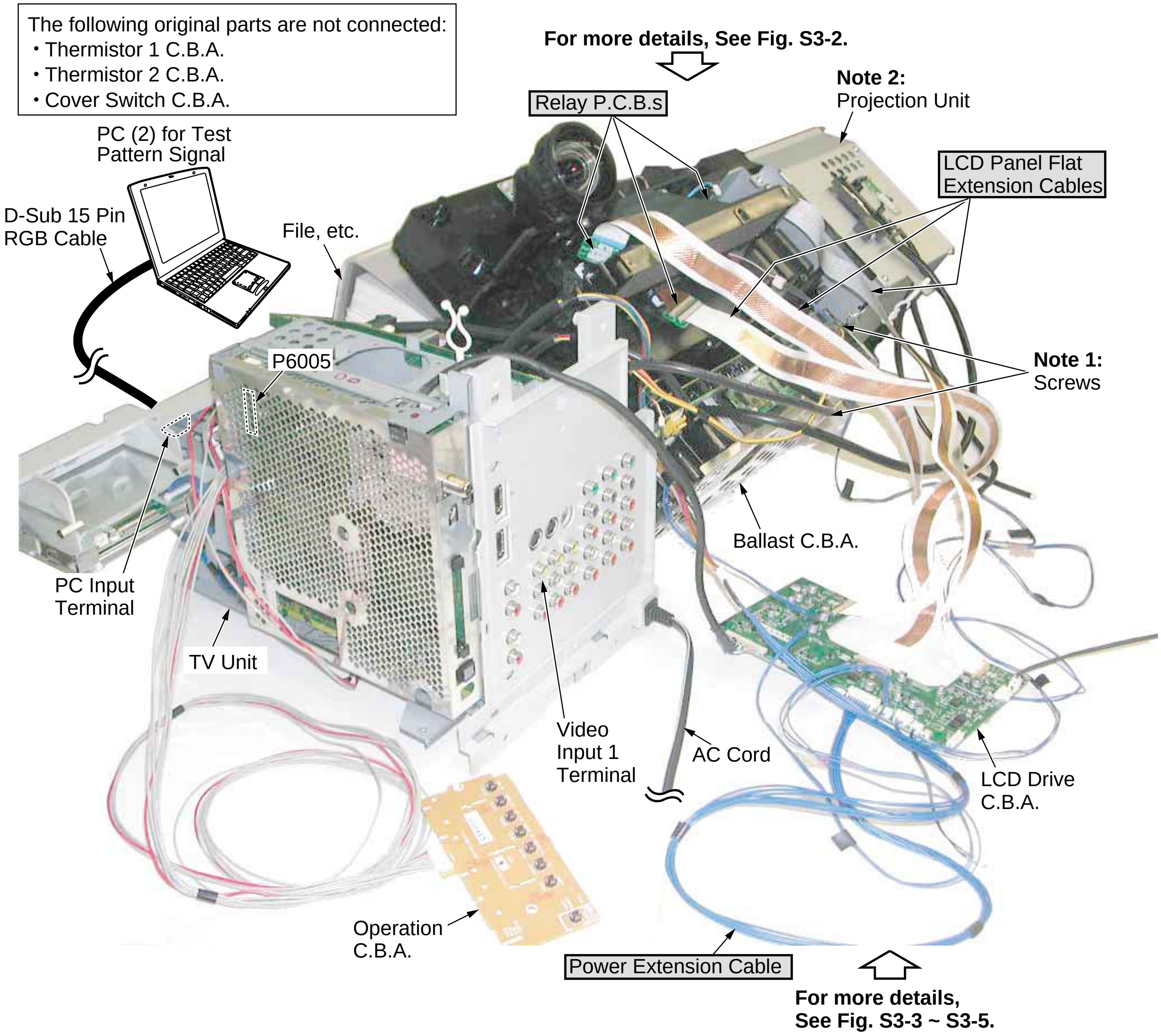
It is possible to adjust the Full Mirror and Polarizer of Projection Unit.

The following service tools are required:

- LCD Panel Flat Extension Cable X3
- Relay P.C.B. X3
- Fan1,3 Extension Cable (LSUA0039) X2
- Fan2 Extension Cable (LSUA0040)
- Power Extension Cable (LSUA0038)
- Thermistor 1 Defeat Cable (LSUA0003)
- Thermistor 2 Defeat Cable (LSUA0013)
- Cover Switch Defeat Cable (LSUA0041)

The following equipment is required:

- Screen
- PC (2) for Test Pattern Signal
- D-Sub 15 Pin RGB Cable (for connecting the PC Input Terminal)



The following original parts are not connected:

- Thermistor 1 C.B.A.
- Thermistor 2 C.B.A.
- Cover Switch C.B.A.

For more details, See Fig. S3-2.

For more details, See Fig. S3-3 ~ S3-5.

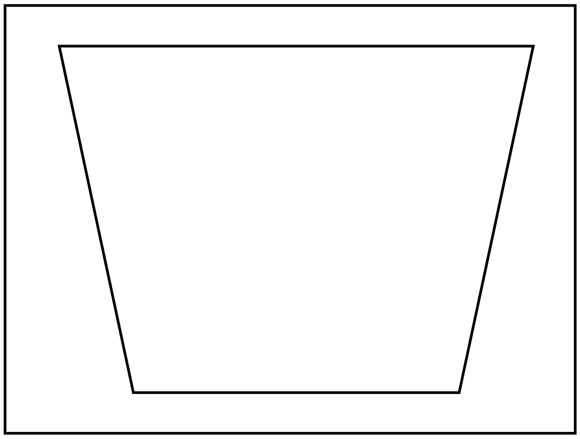
Relay P.C.B.s
Note 2:
Projection Unit
PC (2) for Test Pattern Signal
LCD Panel Flat Extension Cables
D-Sub 15 Pin RGB Cable
File, etc.
P6005
Note 1:
Screws
Ballast C.B.A.
PC Input Terminal
TV Unit
Video Input 1 Terminal
AC Cord
LCD Drive C.B.A.
Operation C.B.A.
Power Extension Cable

Fig. S3-1

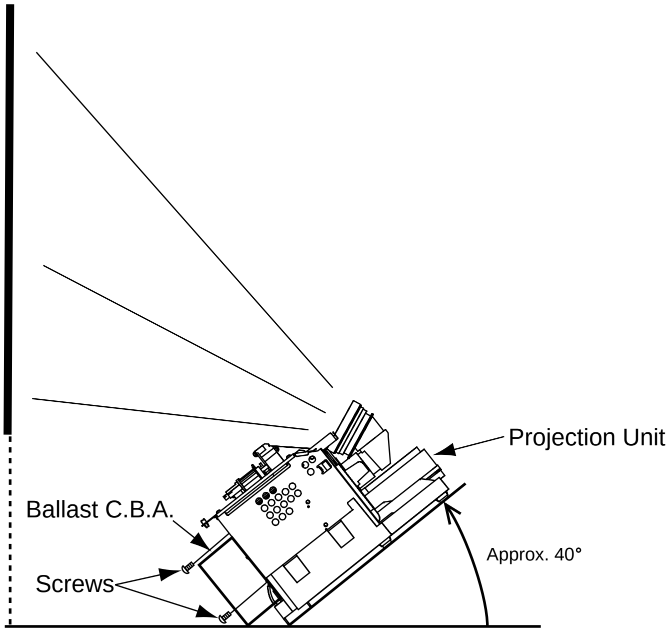
Note for Service Position (3):

1. Tighten the 2 Screws on the Ballast C.B.A. to secure with the Projection Unit for stability.
2. Project the picture onto the white screen so that the picture be within the limits of the Screen as shown.

<Mechanical Adjustment Setting>



<White Screen>


Projection Unit
Ballast C.B.A.
Screws
Approx. 40°

<Side View>

Detailed View for Service Position (3)

Note:
Take care not to apply excessive pressure to the LCD Panel Flexible Cables when servicing.

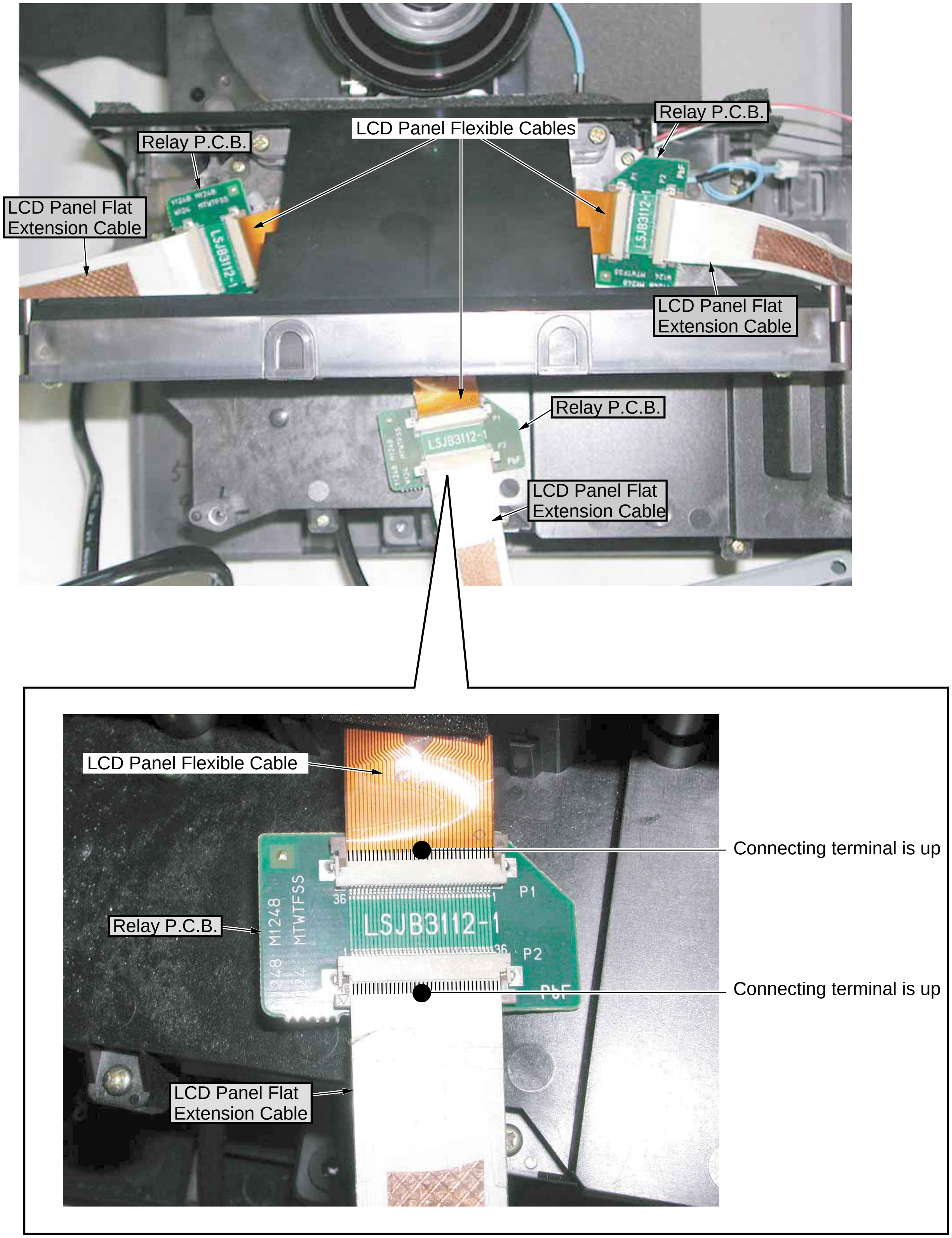

Relay P.C.B.
LCD Panel Flexible Cables
Relay P.C.B.
LCD Panel Flat Extension Cable
LCD Panel Flat Extension Cable
Relay P.C.B.
LCD Panel Flat Extension Cable
LCD Panel Flexible Cable
Connecting terminal is up
Relay P.C.B.
LSJB3112-1
P1
P2
Connecting terminal is up
LCD Panel Flat Extension Cable

Fig. S3-2

Detailed View for Service Position (3)

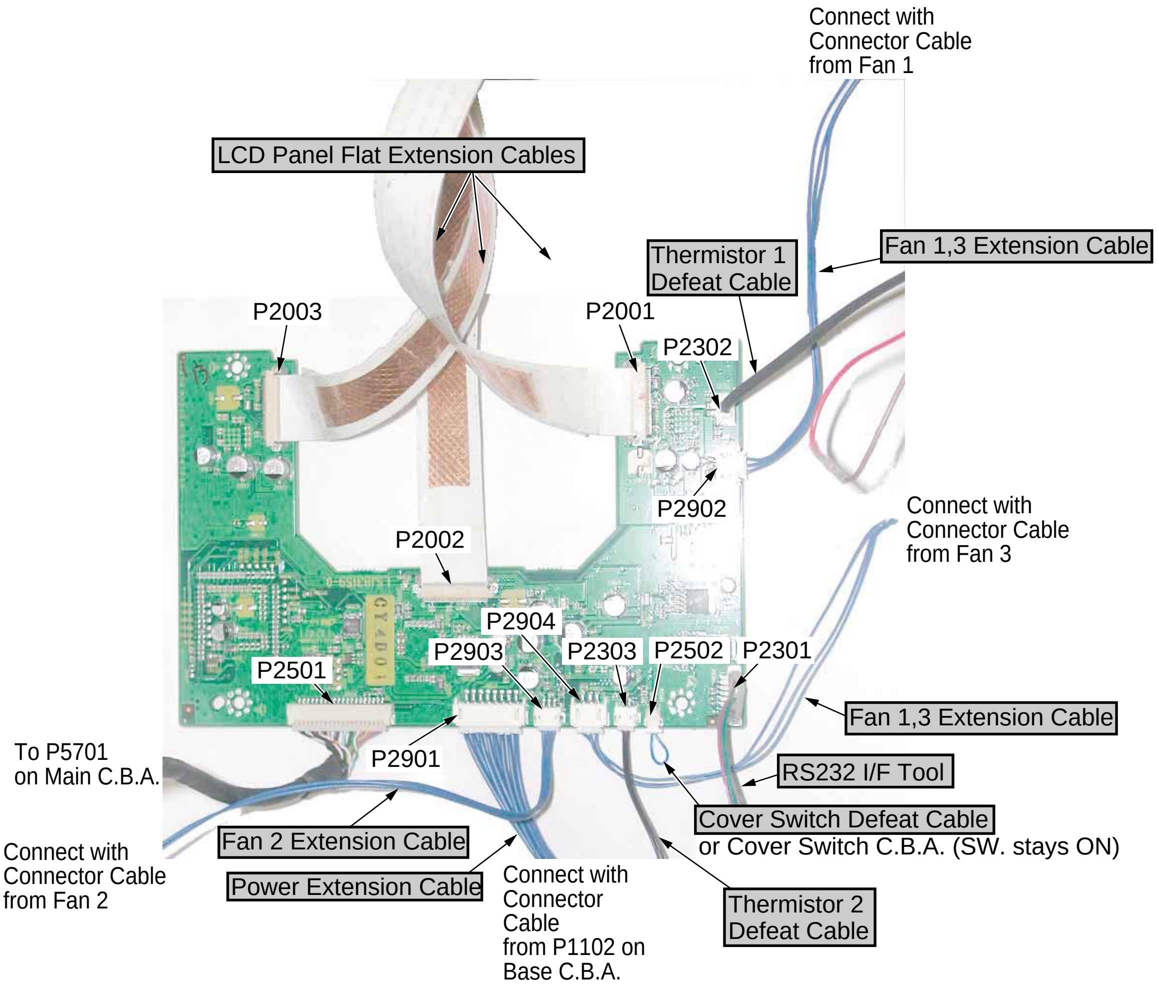

Connect with
Connector Cable
from Fan 1
LCD Panel Flat Extension Cables
Thermistor 1
Defeat Cable
Fan 1,3 Extension Cable
P2003
P2001
P2302
P2902
Connect with
Connector Cable
from Fan 3
P2002
P2904
P2903
P2303
P2502
P2301
P2501
Fan 1,3 Extension Cable
To P5701
on Main C.B.A.
P2901
RS232 I/F Tool
Cover Switch Defeat Cable
or Cover Switch C.B.A. (SW. stays ON)
Connect with
Connector Cable
from Fan 2
Fan 2 Extension Cable
Power Extension Cable
Connect with
Connector
Cable
from P1102 on
Base C.B.A.
Thermistor 2
Defeat Cable

Fig. S3-3

Detailed View for Service Position (3)

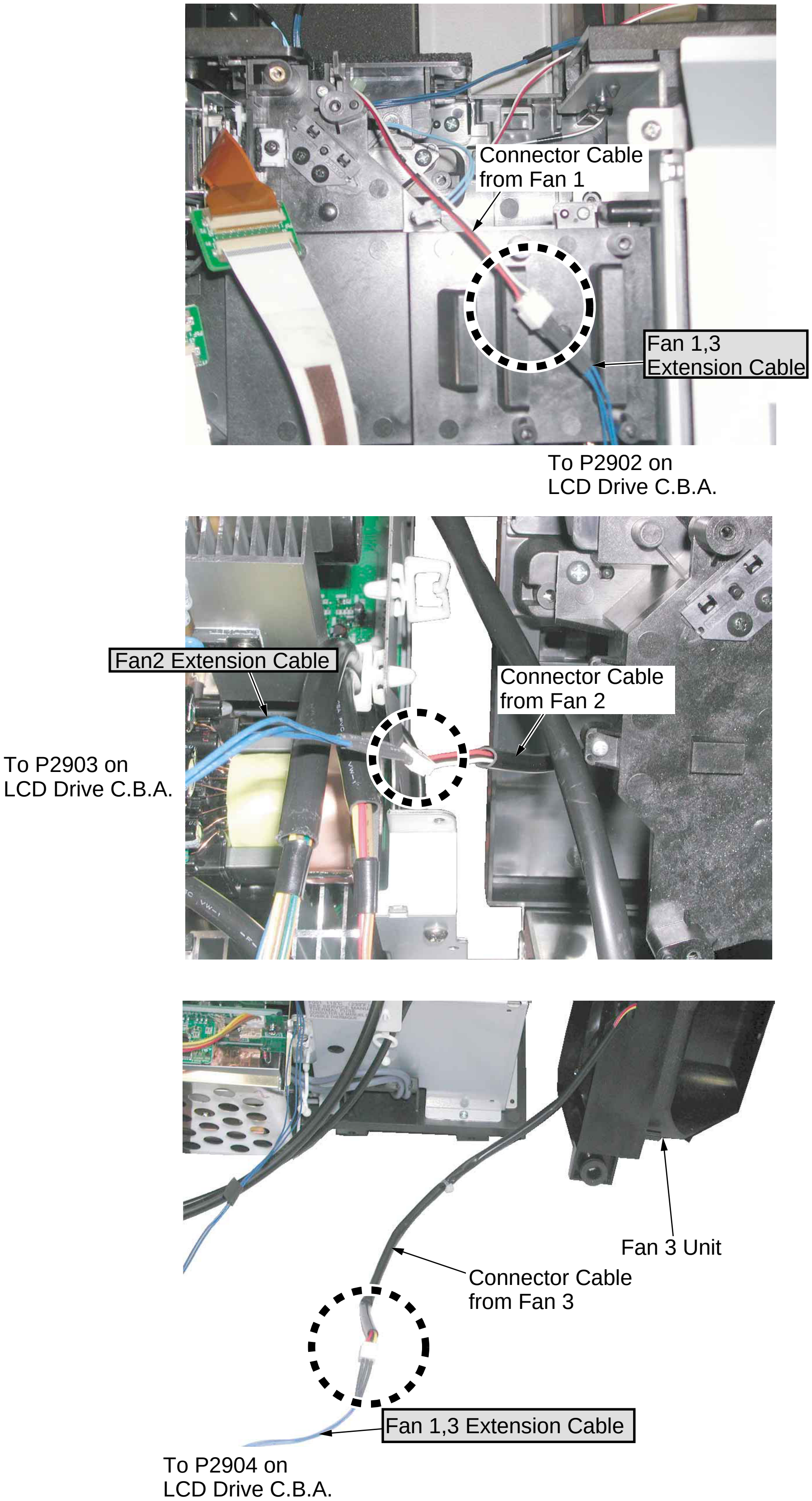

Connector Cable
from Fan 1
Fan 1,3
Extension Cable
To P2902 on
LCD Drive C.B.A.
Fan2 Extension Cable
Connector Cable
from Fan 2
To P2903 on
LCD Drive C.B.A.
Fan 3 Unit
Connector Cable
from Fan 3
Fan 1,3 Extension Cable
To P2904 on
LCD Drive C.B.A.

Fig. S3-4

Detailed View for Service Position (3)

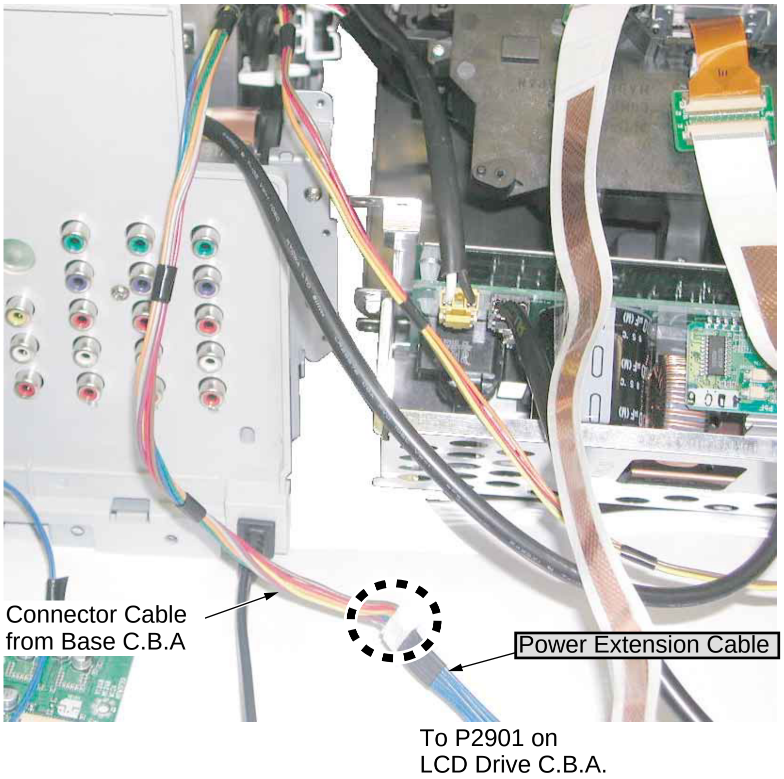

Connector Cable
from Base C.B.A
Power Extension Cable
To P2901 on
LCD Drive C.B.A.

Fig. S3-5

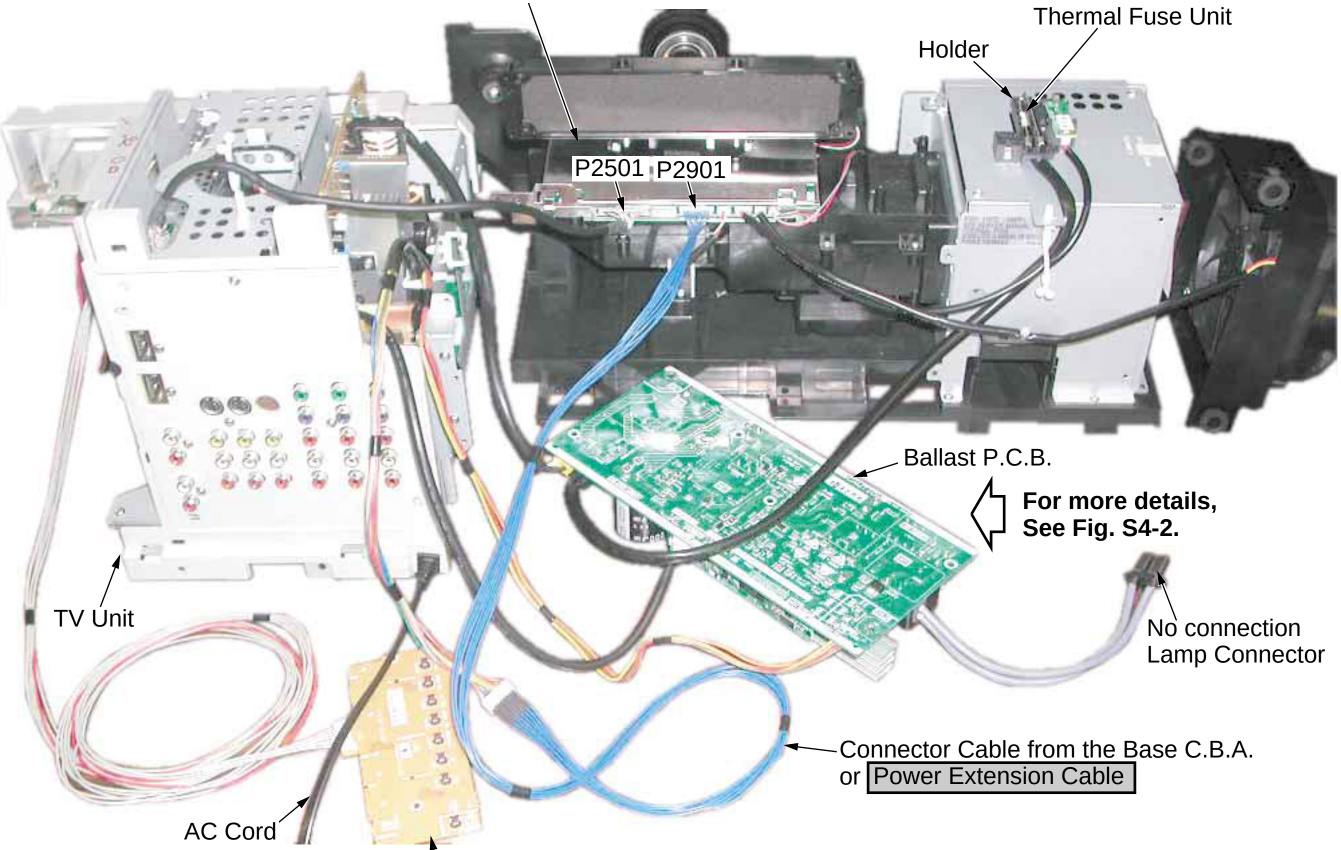
SERVICE POSITION (4)

BALLAST C.B.A. CHECK

It is possible to check the Ballast C.B.A.

The following original parts are not connected:
- Ballast Shield Case Top
- Ballast Shield Case Bottom

CAUTION:
Make sure that the Thermal Fuse Unit (F001) does not touch any metallic parts when the Thermal Fuse Unit is not installed to this original position.

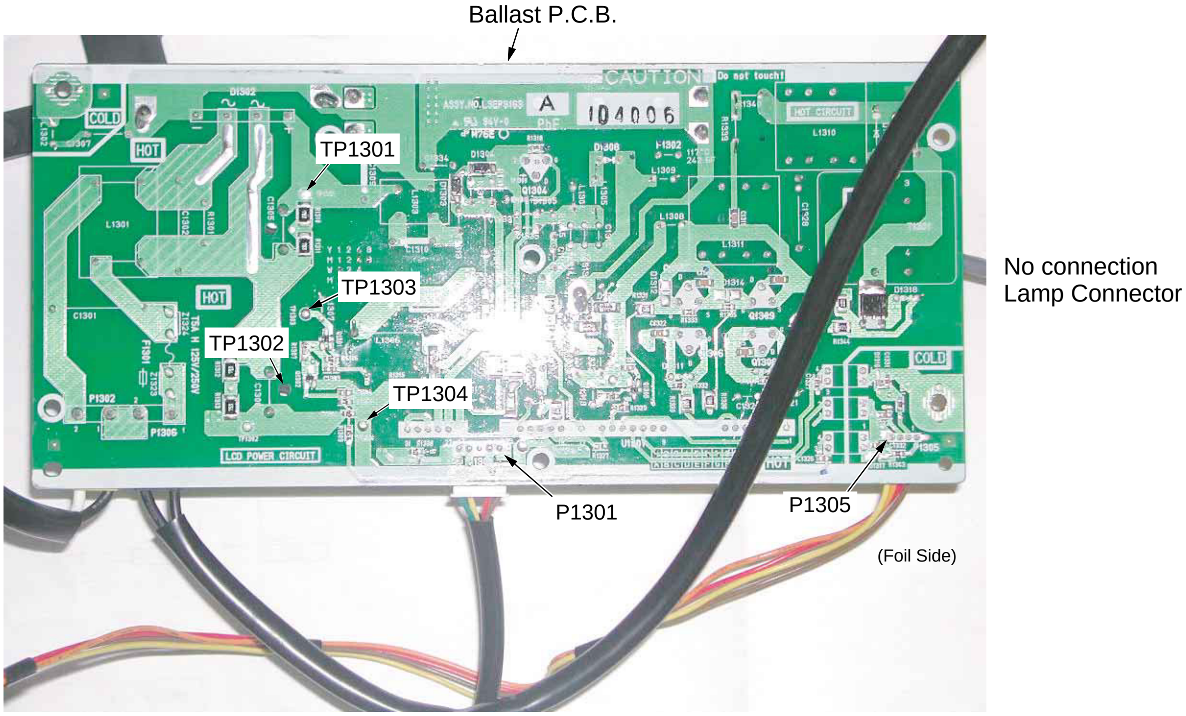

LCD Drive C.B.A.
Thermal Fuse Unit
Holder
P2501
P2901
Ballast P.C.B.
TV Unit
No connection
Lamp Connector
Connector Cable from the Base C.B.A.
or Power Extension Cable
AC Cord
Operation C.B.A.

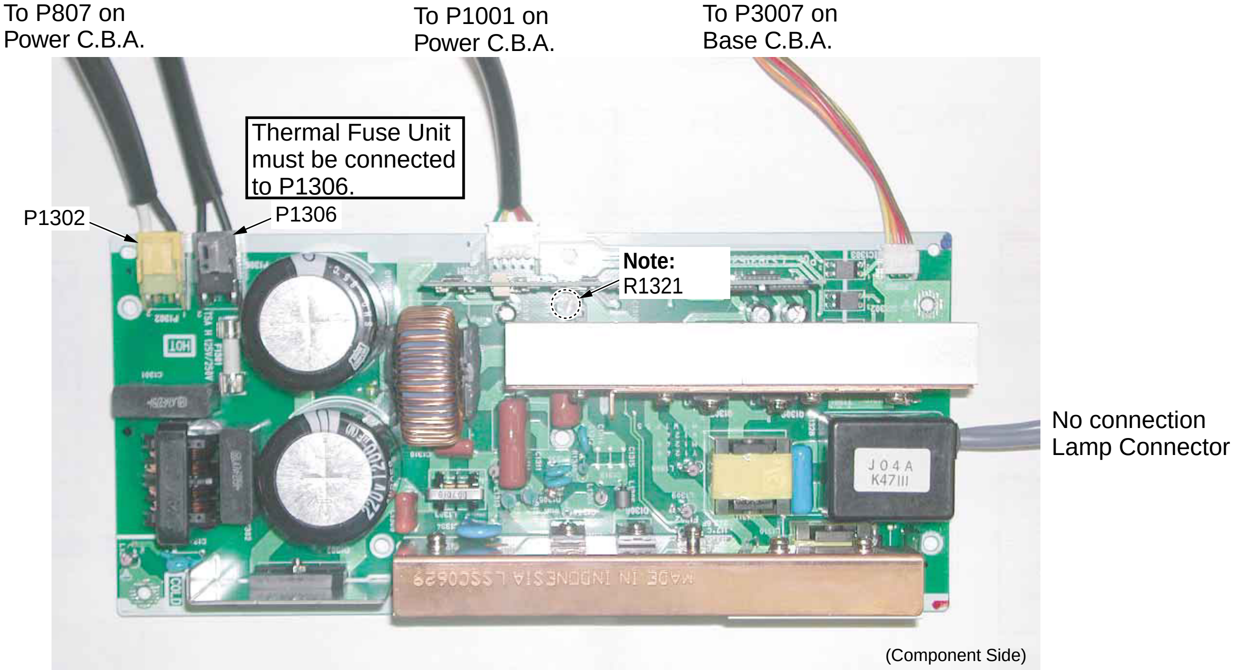
For more details, See Fig. S4-2.

Refer to "CHECKING THE BALLAST C.B.A." in "TROUBLESHOOTING HINTS FOR COMPONENT LEVEL REPAIR."

Fig. S4-1

Detailed View for Service Position (4)


Ballast P.C.B.
TP1301
TP1303
TP1302
TP1304
No connection
Lamp Connector
P1301
P1305
(Foil Side)

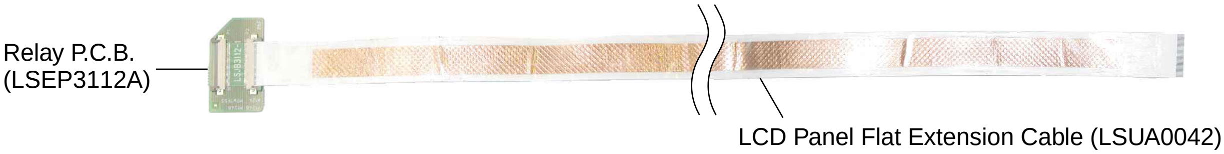

To P807 on
Power C.B.A.
To P1001 on
Power C.B.A.
To P3007 on
Base C.B.A.
Thermal Fuse Unit must be connected to P1306.
P1302
P1306
Note:
R1321
No connection
Lamp Connector
(Component Side)

<With the Ballast Shield Case Top and the Ballast Shield Case Bottom removed>

Note:
When servicing the Ballast C.B.A., do not turn the Variable resistor (R1321) on the Ballast C.B.A.

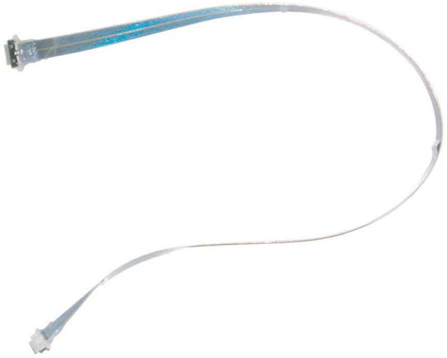
Fig. S4-2

LSEP3112A **Relay P.C.B.**
LSUA0042 **LCD Panel Flat Extension Cable**


Relay P.C.B.
(LSEP3112A)
LCD Panel Flat Extension Cable (LSUA0042)

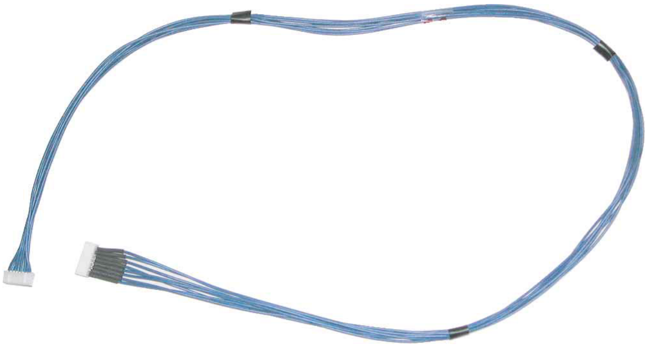
Note:
1) 3 of each are required for servicing.
2) Extension Cable-5 which was included in the 2002 model checker can be used for Relay P.C.B. (LSEP3112A) and LCD Panel Flat Extension Cable (LSUA0042).

LSUA0037 **Signal Extension Cable**

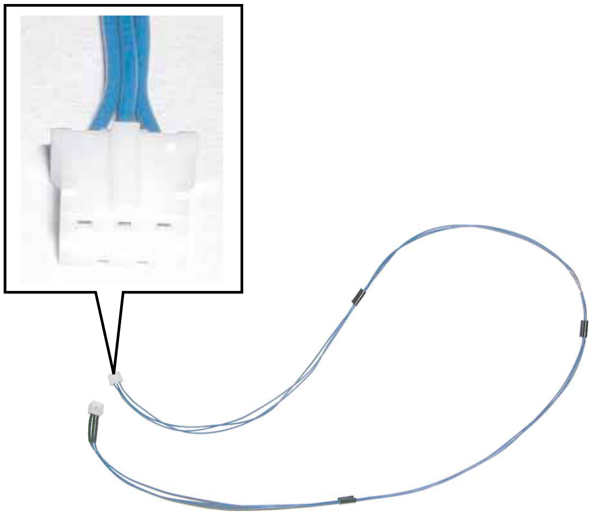


Note:
20-pin Cable (LSJA0467) which was used in 2004 model can be used for this service tool.

LSUA0038 **Power Extension Cable**

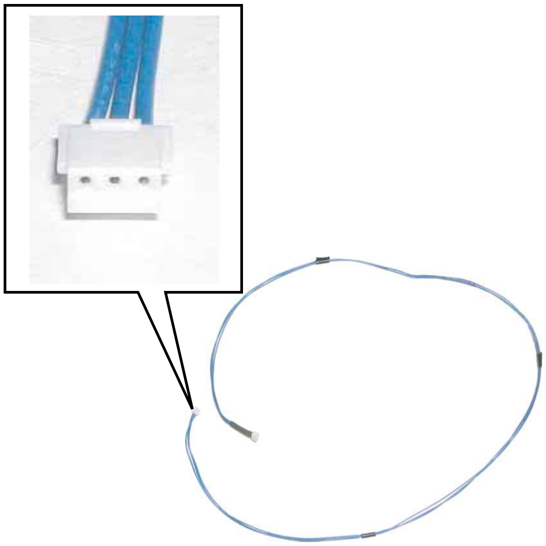


LSUA0039 **Fan1,3 Extension Cable**

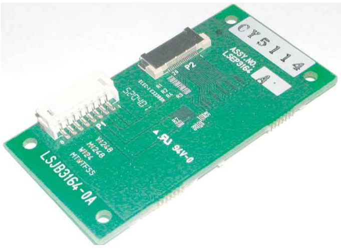


Note:
2 of each are required for servicing.

LSUA0040 **Fan2 Extension Cable**



LSEP3164A **Converter P.C.B.**



LSUA0054 **Extension Cable 8P**

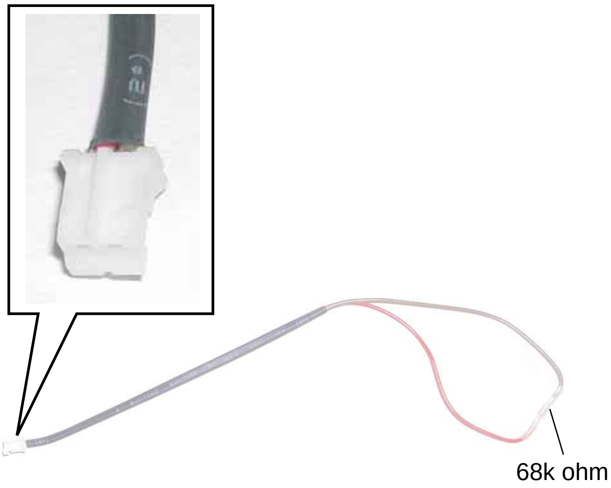
Note:
8-pin Connector Cable (LSJA0530) which was used in PT-43/50/60LC14-K model can be used for this service tool.

LSEP3102A **Monitor P.C.B.**

LSUA0041 **Cover Switch Defeat Cable**

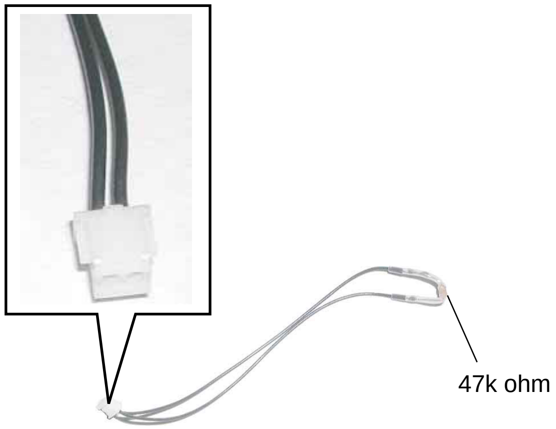
Note:
A replacement part (LSJA0476, LSJA0551), which is shorted, can be used for this service tool.

LSUA0003 **Thermistor 1 Defeat Cable**



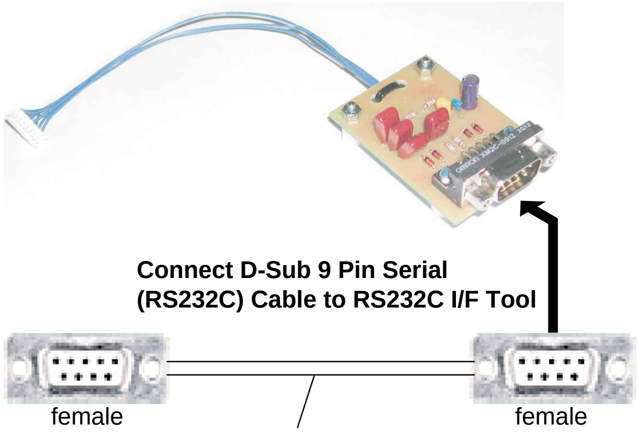
Note:
Replacement part (LSJA0477), to which a 68k ohm resistor has been attached, can be used for this service tool.

LSUA0013 **Thermistor 2 Defeat Cable**



Note:
Replacement part (LSJA0533, LSJA0478), to which a 47k ohm resistor has been attached, can be used for this service tool.

LSUA0043 **RS232C I/F Tool**



Connect D-Sub 9 Pin Serial (RS232C) Cable to RS232C I/F Tool

D-Sub 9 Pin Serial (RS232C) Cable: Purchase locally

RS232C Connecting tool
(For 2002 models (PT-40LC12/45LC12))

Note:
RS232C Connecting tool which was included in the 2002 model checker as shown above can be used for both RS232C I/F Tool (LSUA0043) and D-Sub 9 Pin Serial (RS232C) Cable.

6 DISASSEMBLY/ASSEMBLY PROCEDURES

6.1. CABINET SECTION

CABINET SECTION

DISASSEMBLY METHOD OF CABINET SECTION

Cabinet section contains following removal procedures:

REMOVAL OF THE BALLAST C.B.A. AND THE PROJECTION UNIT FROM THE CABINET

REMOVAL OF THE TV UNIT AND THE DIGITAL TUNER C.B.A. FROM THE CABINET

REMOVAL OF THE BASE BODY UNIT

REMOVAL OF THE FRONT JACK C.B.A., THE CARD C.B.A., THE REAR JACK C.B.A., THE POWER C.B.A., THE MAIN C.B.A. AND THE BASE C.B.A. FROM THE TV UNIT

REMOVAL OF THE SCREEN UNIT FROM THE DISPLAY

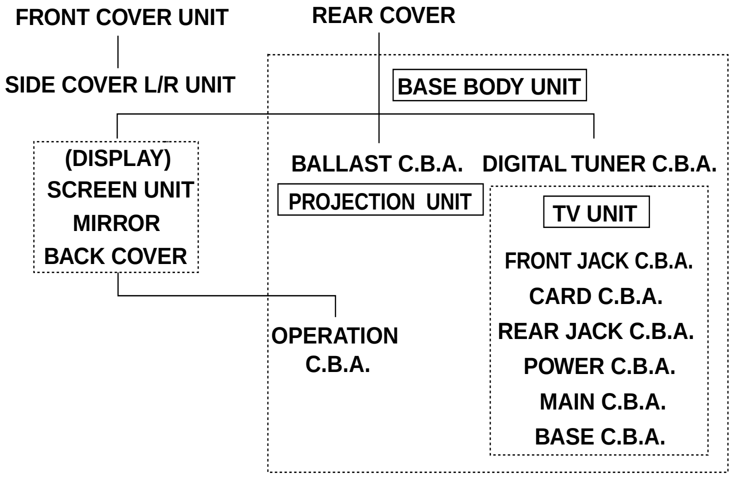
REMOVAL OF THE MIRROR FROM THE BACK COVER

REMOVAL OF THE OPERATION C.B.A. FROM THE CABINET

REMOVAL OF THE BALLAST SHIELD CASE TOP AND THE BALLAST SHIELD CASE BOTTOM

DISASSEMBLY FLOWCHART

This flow chart indicates the disassembly steps of the cabinet parts and the P.C.Boards in order to gain access to item (s) to be serviced. When reassembling, perform the step (s) in the reverse order. Bend, route and dress the wires as they were originally.


FRONT COVER UNIT
REAR COVER
SIDE COVER L/R UNIT
BASE BODY UNIT
(DISPLAY)
SCREEN UNIT
MIRROR
BACK COVER
BALLAST C.B.A.
DIGITAL TUNER C.B.A.
PROJECTION UNIT
TV UNIT
FRONT JACK C.B.A.
CARD C.B.A.
REAR JACK C.B.A.
POWER C.B.A.
MAIN C.B.A.
BASE C.B.A.
OPERATION C.B.A.

Note :

a. Place a cloth or some other soft material under the P.C. Boards or Unit to prevent damage.
b. When reinstalling, ensure that the connectors are connected firmly and electrical components have not been damaged.
c. Do not supply power to the unit during disassembly and reassembly.

REMOVAL OF THE BALLAST C.B.A. AND THE PROJECTION UNIT FROM THE CABINET

1. **(PT-44LCX65-K/PT-52LCX65-K)**
   Remove the Rear Cover by removing the 18 (or 21: **PT-52LCX65-K**) Screws (401, 454) then pinching the 4 latch tabs.

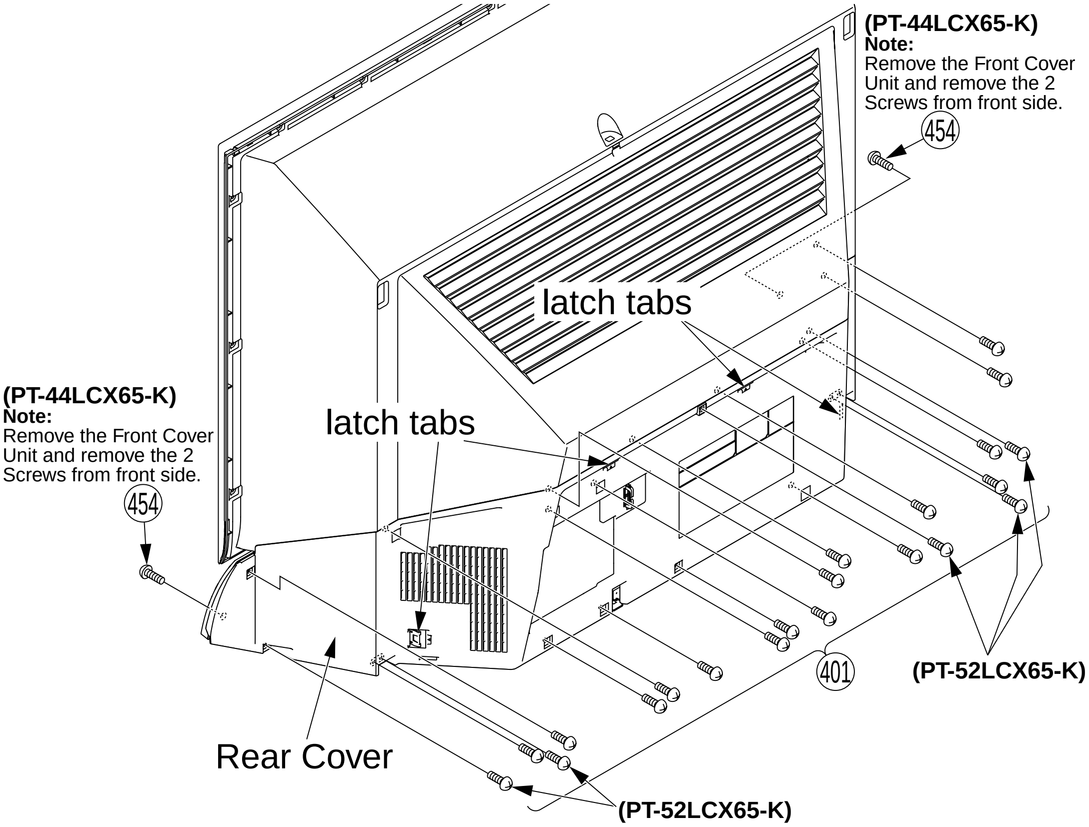

(PT-44LCX65-K)
Note:
Remove the Front Cover Unit and remove the 2 Screws from front side.
454
latch tabs
(PT-44LCX65-K)
Note:
Remove the Front Cover Unit and remove the 2 Screws from front side.
454
latch tabs
401
(PT-52LCX65-K)
Rear Cover
(PT-52LCX65-K)

Fig. D1-1-1

(PT-61LCX65-K)
Remove the Rear Cover by removing the 25 Screws (401) then pinching the 4 latch tabs.

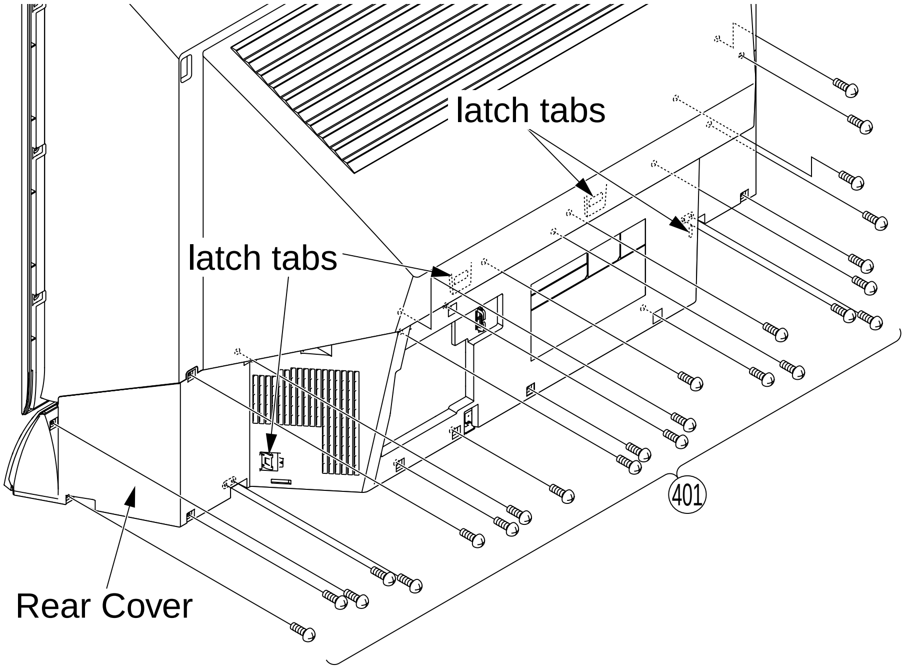
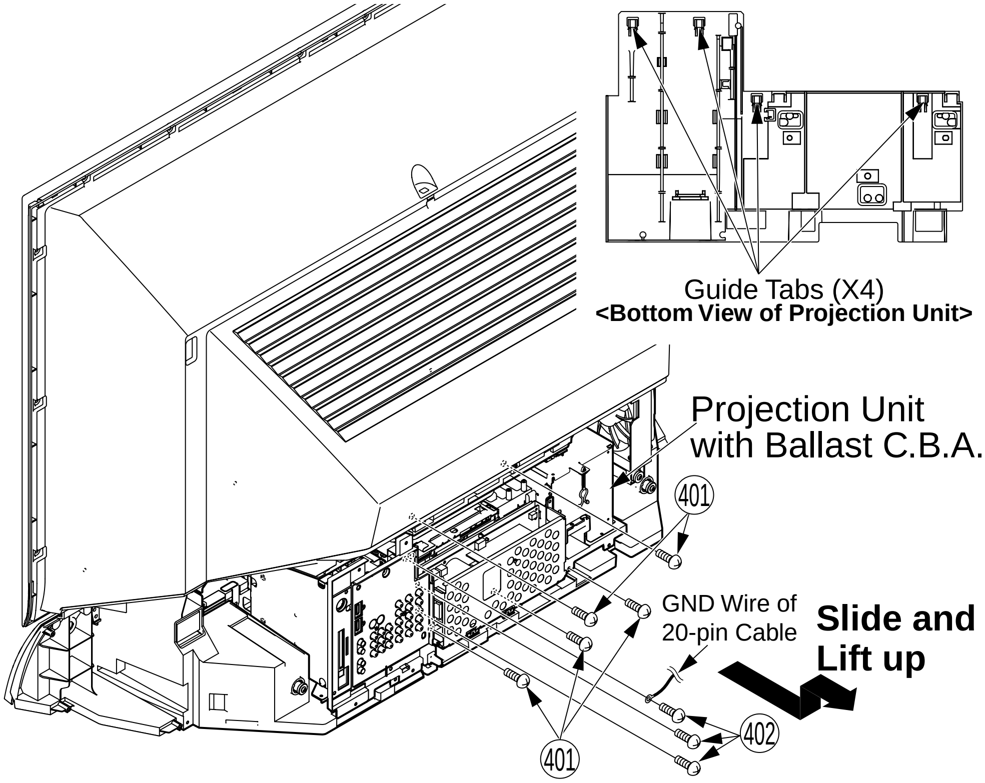
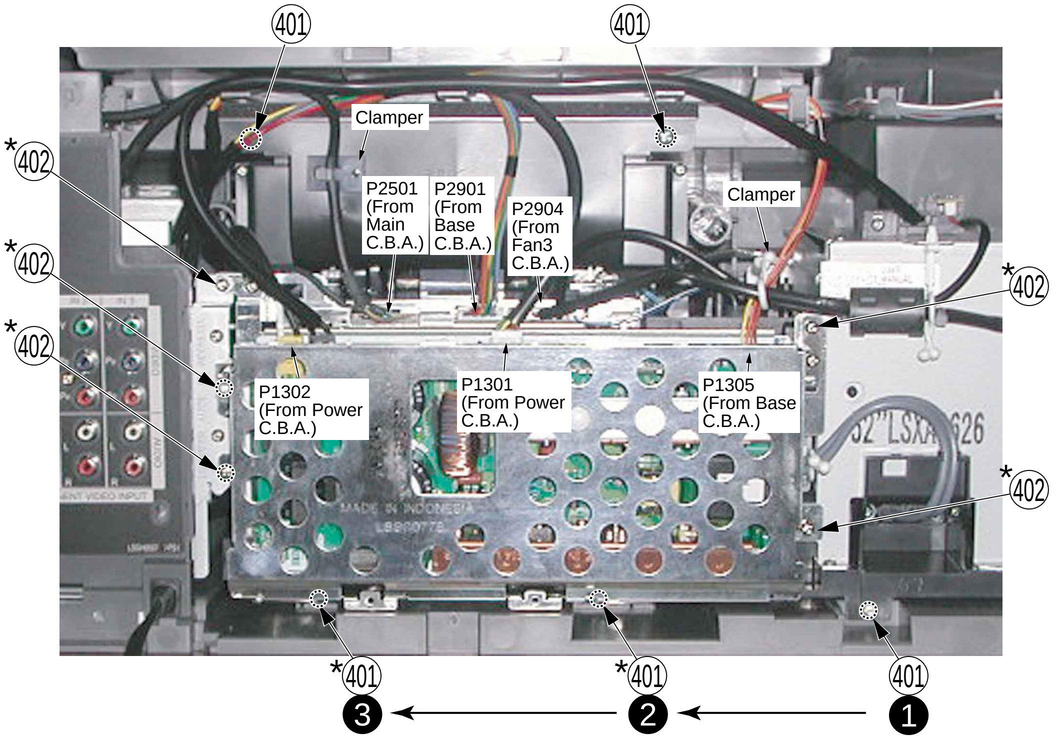

latch tabs
latch tabs
401
Rear Cover

Fig. D1-1-2

2. 1) Disconnect Connectors P1301, P1302, P1305, P2501 (20-pin Cable), P2901, P2904.
   Note: Take extreme care not to damage the 20-pin Cable when disconnecting.
   2) Remove the 5 Screws (401) and the 3 Screws (402).
   3) Slide and lift up the Projection Unit with the Ballast C.B.A. by releasing the 4 Guide Tabs.


Guide Tabs (X4)
<Bottom View of Projection Unit>
Projection Unit with Ballast C.B.A.
401
GND Wire of 20-pin Cable
Slide and Lift up
402
401

***: The 2 Screws *(401) and the 5 Screws *(402) are for removing the Ballast C.B.A.**


401
401
Clamper
*402
*402
*402
P2501 (From Main C.B.A.)
P2901 (From Base C.B.A.)
P2904 (From Fan3 C.B.A.)
Clamper
*402
P1302 (From Power C.B.A.)
P1301 (From Power C.B.A.)
P1305 (From Base C.B.A.)
*402
*401
*401
401
3
2
1

Reassembly Note: When installing, tighten the 3 Screws (401) ❶❷❸ in order.

Fig. D1-2

3. 1) Disconnect the Connector P1306.
   2) Remove the 2 Screws (451) and disconnect the Lamp Connector while releasing the hook.
   3) Remove the Ballast C.B.A. by releasing the 2 Screws (402).

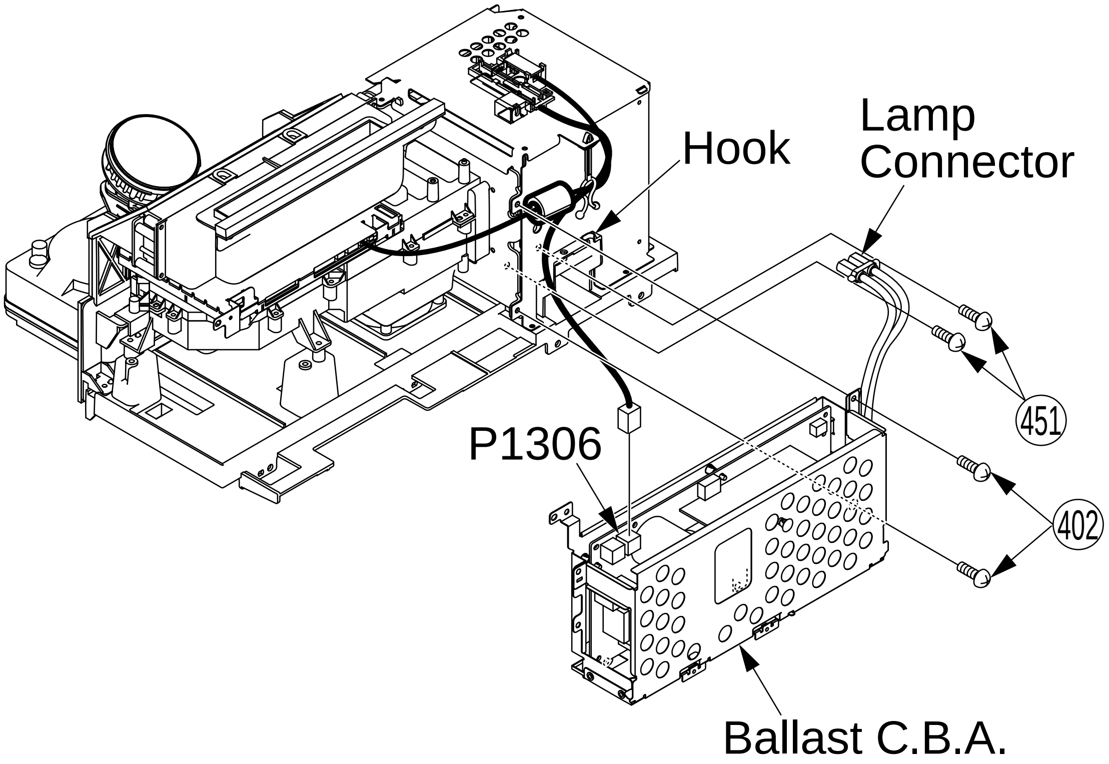

Hook
Lamp Connector
451
P1306
402
Ballast C.B.A.

Fig. D1-3

4. 1) Remove the Top Duct 3 Unit by removing the 4 Screws (421).

   CAUTION:

   When removing the Screws (421) on the Top Duct 3 Unit, plastic dust may be produced. Therefore, confirm that there is no dust on the Top Duct 3 Unit. If there is dust, clean the Top Duct 3 Unit with a brush, etc. Otherwise, dust may adhere to the inside of the screen.

   2) Remove the Lamp from the Projection Unit by loosening the Screw.

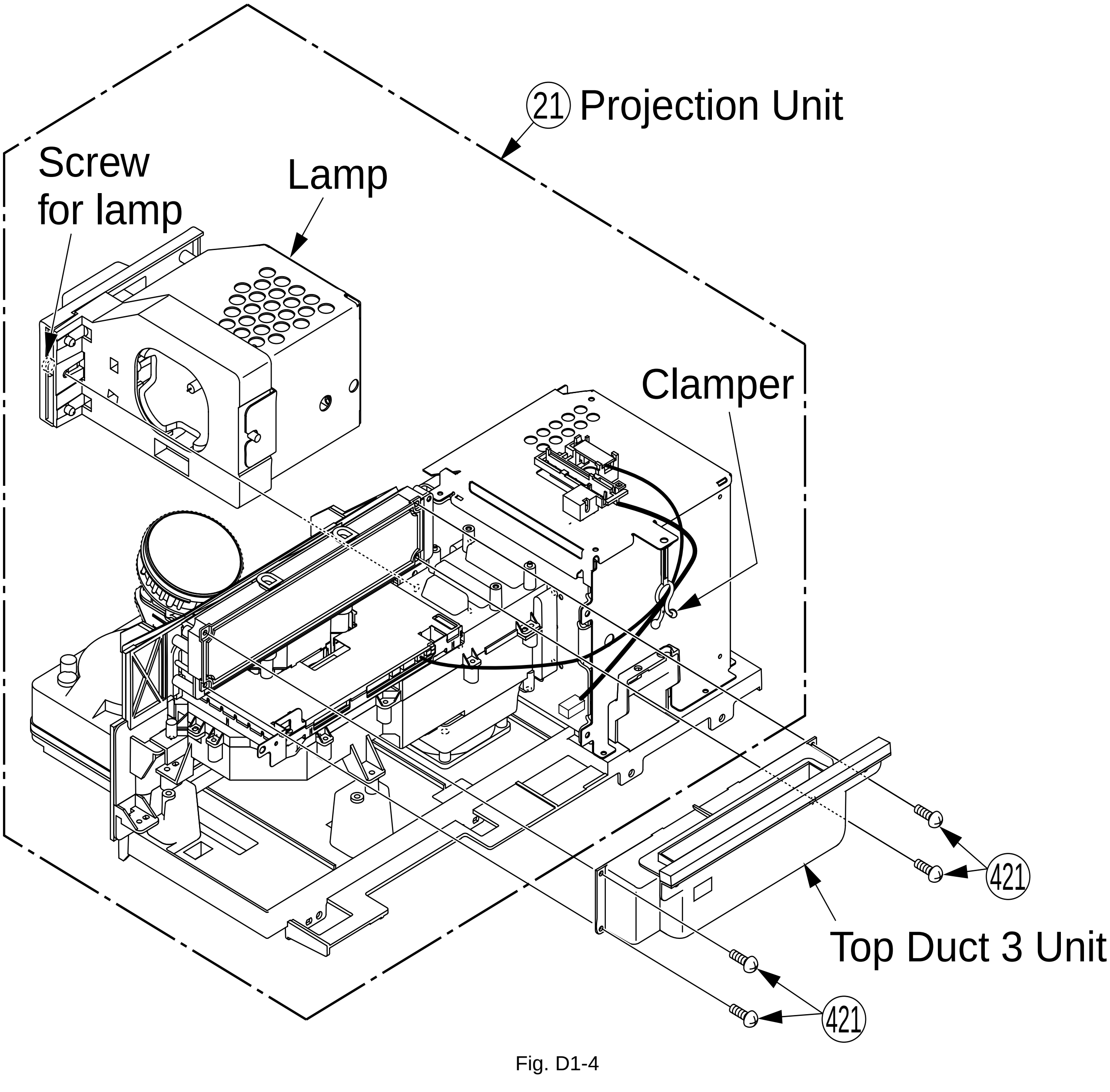


Fig. D1-4

Note:

After replacing the Projection Unit, be sure to perform "ADJUSTMENT of Projection Unit." Refer to "WHEN REINSTALLING THE PROJECTION UNIT OR THE BASE BODY UNIT INTO THE UNIT AT THE USER'S LOCATION:."

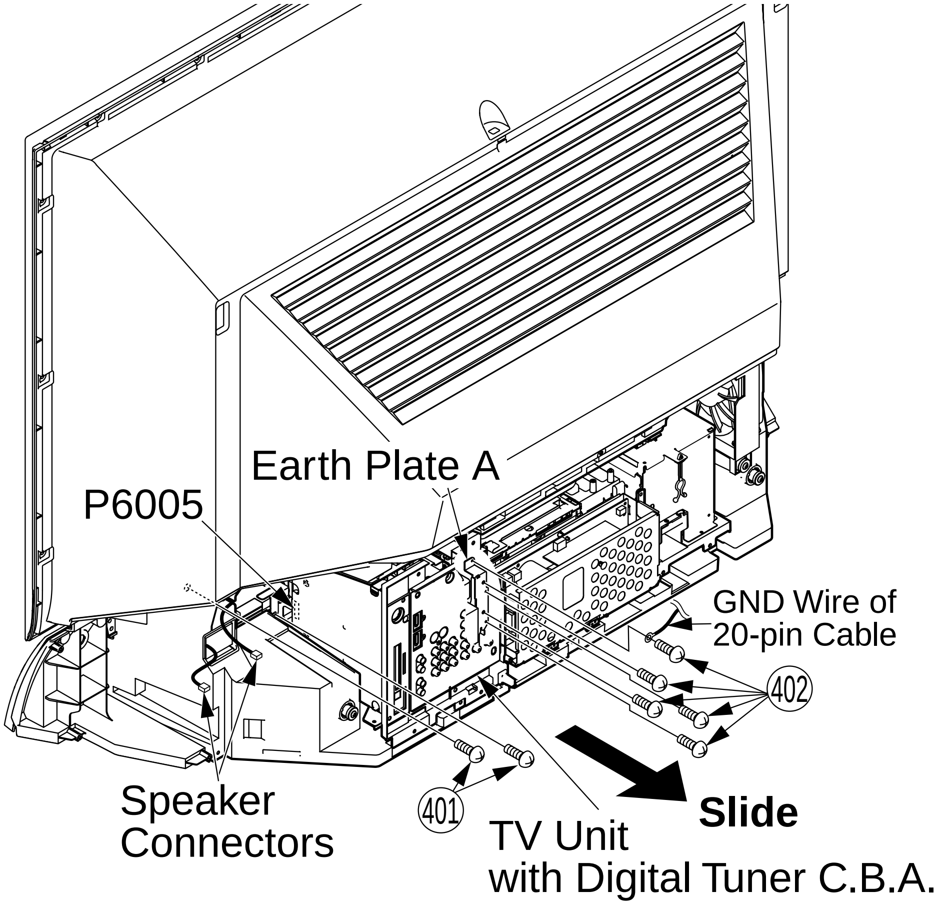
Replacement Note of Projection Unit:

These parts will be necessary when replacing. Set aside, and keep and re-use.

- Top Duct 3 Unit

REMOVAL OF THE TV UNIT AND THE DIGITAL TUNER C.B.A. FROM THE CABINET

1. Remove the Rear Cover. Refer to Step 1 in "REMOVAL OF THE BALLAST C.B.A. AND THE PROJECTION UNIT FROM THE CABINET."
2. 1) Remove the 2 Screws (401) and the 5 Screws (402) on the Earth Plate A. Then, remove the Earth Plate A.
   2) Disconnect Connector P1301, P1302, P1305, P2501 (20-pin Cable), P2901 and the 2 Speaker Connectors.
   Note: Take extreme care not to damage the 20-pin Cable when disconnecting.
   3) Slide the TV Unit with the Digital Tuner C.B.A. slightly, and disconnect Connector P6005.
   4) Remove the TV Unit with the Digital Tuner C.B.A.


Earth Plate A
P6005
GND Wire of 20-pin Cable
402
Speaker Connectors
401
Slide
TV Unit with Digital Tuner C.B.A.

The 5 Screws (402) are for removing the Earth Plate A

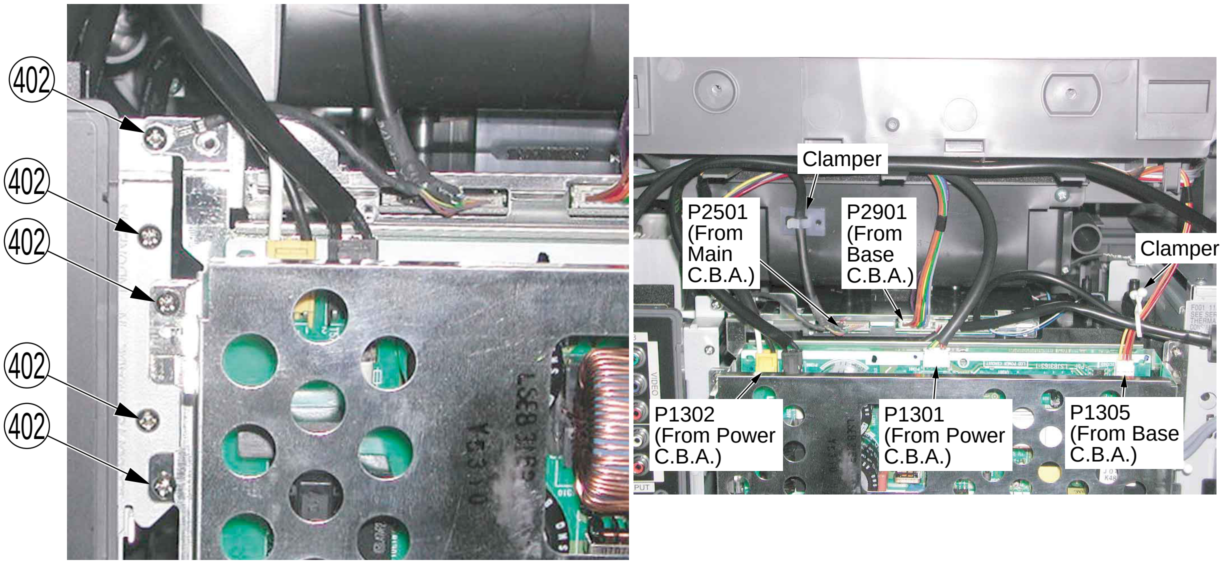

402
402
402
402
402
Clamper
P2501 (From Main C.B.A.)
P2901 (From Base C.B.A.)
Clamper
P1302 (From Power C.B.A.)
P1301 (From Power C.B.A.)
P1305 (From Base C.B.A.)

Fig. D2-1

3. 1) Remove the DTV Jack Holder by removing the Screw (402).
   2) Disconnect Connector DT10.
   3) Remove the Digital Tuner C.B.A. by removing the 5 Screws (480). (BtoB Connector DT12 is disconnected.)

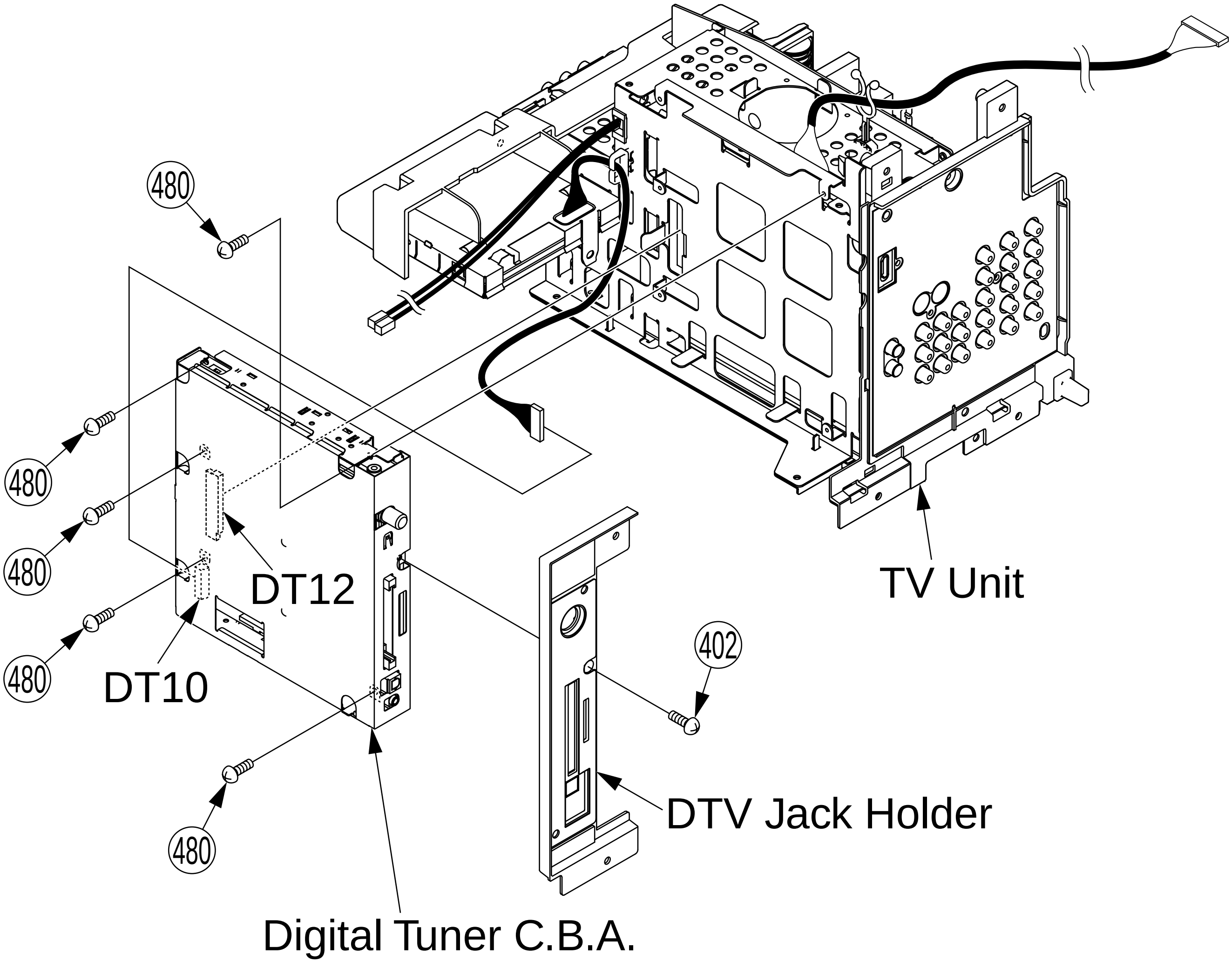

480
480
480
480
480
DT12
DT10
TV Unit
402
DTV Jack Holder
Digital Tuner C.B.A.

Fig. D2-2

REMOVAL OF THE BASE BODY UNIT

1. Remove the Rear Cover. Refer to Step 1 in "REMOVAL OF THE BALLAST C.B.A. AND THE PROJECTION UNIT FROM THE CABINET."
2. Remove the 3 **(PT-44/52LCX65-K)** or the 5 **(PT-61LCX65-K)** Screws (401) from rear side, and remove the Display.

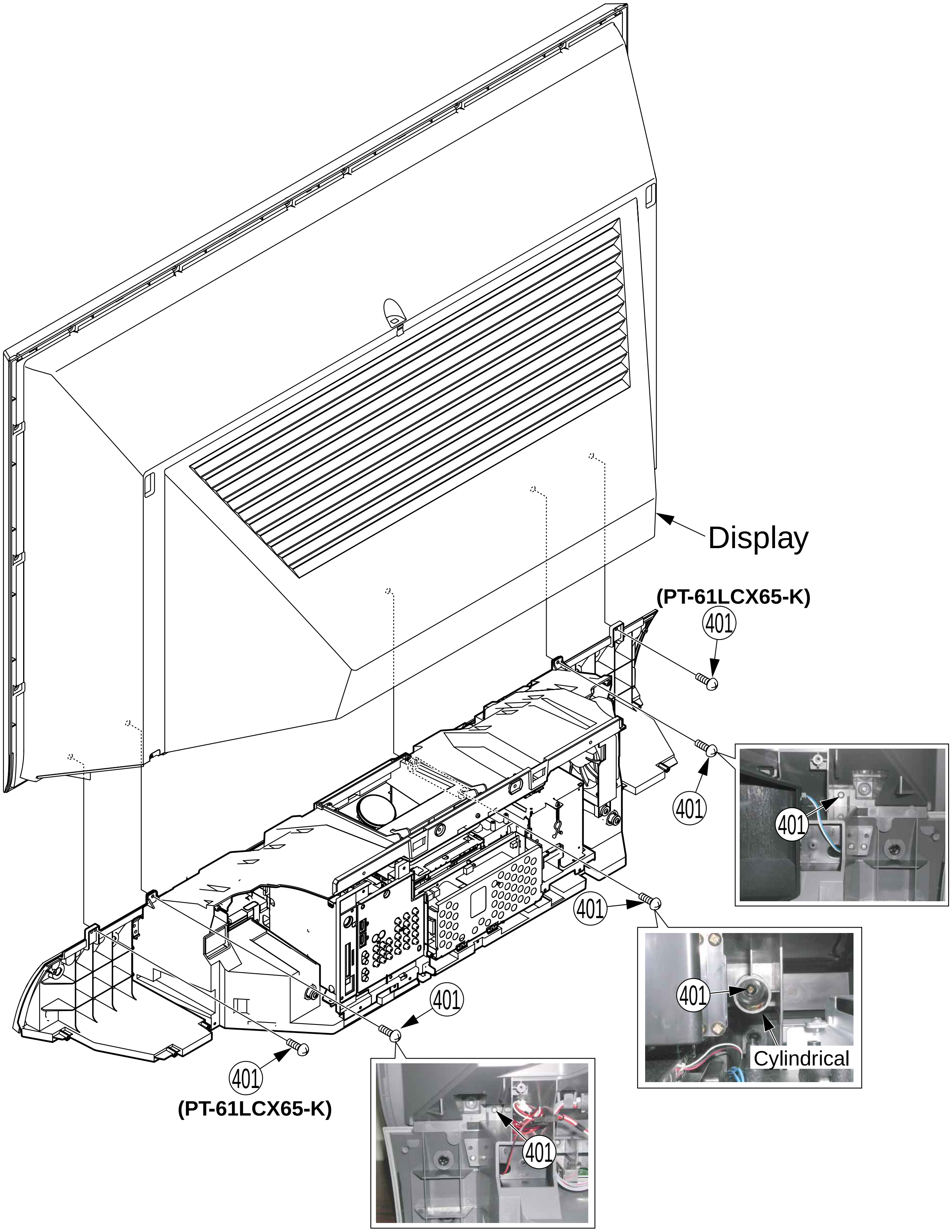

Display
(PT-61LCX65-K)
401
401
401
401
401
401
401
Cylindrical
401
(PT-61LCX65-K)
401

Fig. D3-1

3. 1) Remove the Front Cover Unit from the latches.
   2) Remove the Side Cover L/R Unit by removing the 6 (or 8: **PT-52LCX65-K/PT-61LCX65-K**) Screws (401, 454).

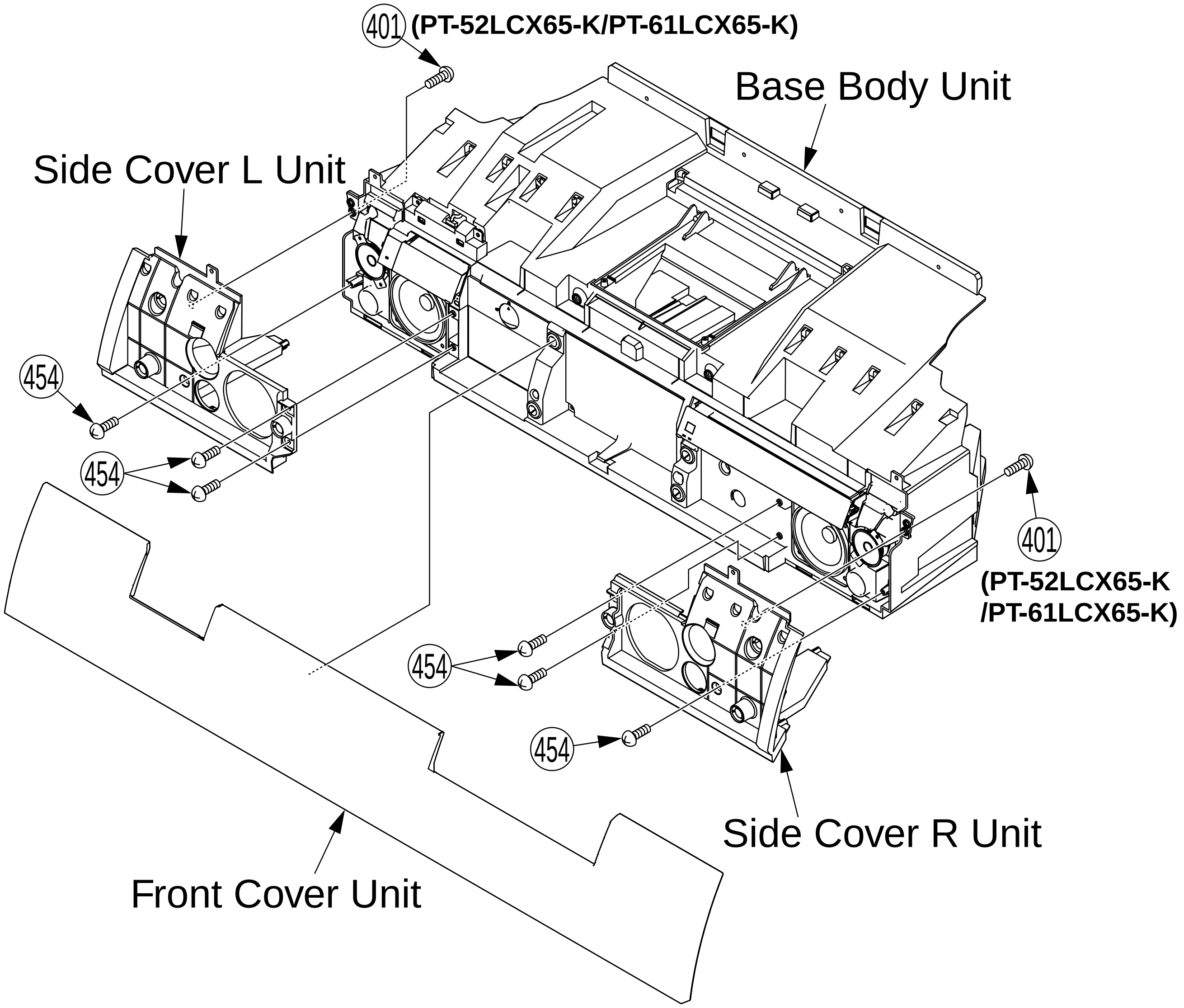

401 (PT-52LCX65-K/PT-61LCX65-K)
Base Body Unit
Side Cover L Unit
454
454
401
(PT-52LCX65-K
/PT-61LCX65-K)
454
454
Side Cover R Unit
Front Cover Unit

Fig. D3-2

Note:
After replacing the Base Body Unit, be sure to perform "ADJUSTMENT of Projection Unit." Refer to "WHEN REINSTALLING THE PROJECTION UNIT OR THE BASE BODY UNIT INTO THE UNIT AT THE USER’S LOCATION:."

REMOVAL OF THE FRONT JACK C.B.A., THE CARD C.B.A., THE REAR JACK C.B.A., THE POWER C.B.A., THE MAIN C.B.A. AND THE BASE C.B.A. FROM THE TV UNIT

CAUTION:

Be sure to make a note of the CURRENT LAMP value (value A) in Service Mode (1/3):

LAMP OPERATION TIME is stored in EEPROM on the Main C.B.A. Therefore, before removing the Main C.B.A. or the TV Unit at the user’s location, make a note of the CURRENT LAMP value (value A) in Service Mode (1/3).

Then, after installing the new Main C.B.A. or the TV Unit at the user’s location, set the CURRENT LAMP value to the original value (value A) in Service Mode.

Otherwise, OSD and LED Lamp replacement indications will be displayed at the wrong time.

Note:

In case it is impossible to make a note of the CURRENT LAMP value because of a defective Main C.B.A., ask the customer their daily average use and the approximate age of the current Lamp. Then, calculate the CURRENT LAMP value as follows and make a note.

Daily average use (hours) X Approx. age (days) = **CURRENT LAMP** (hours)

1. Remove the TV Unit. Refer to Steps 1~3 in "REMOVAL OF THE TV UNIT AND THE DIGITAL TUNER C.B.A. FROM THE CABINET."
2. 1) Remove the Front Jack Earth Plate by removing the Screw (402).
   2) Disconnect Connector P3901, P3902, P3903.
   3) Remove the Front Jack C.B.A. by removing the 2 Screws (421).
   4) Remove the Front Jack Holder with the Card C.B.A. by removing the Screw (402) then releasing the 2 Locking Tabs.
   5) Remove the Card C.B.A. by removing the 2 Screws (421).

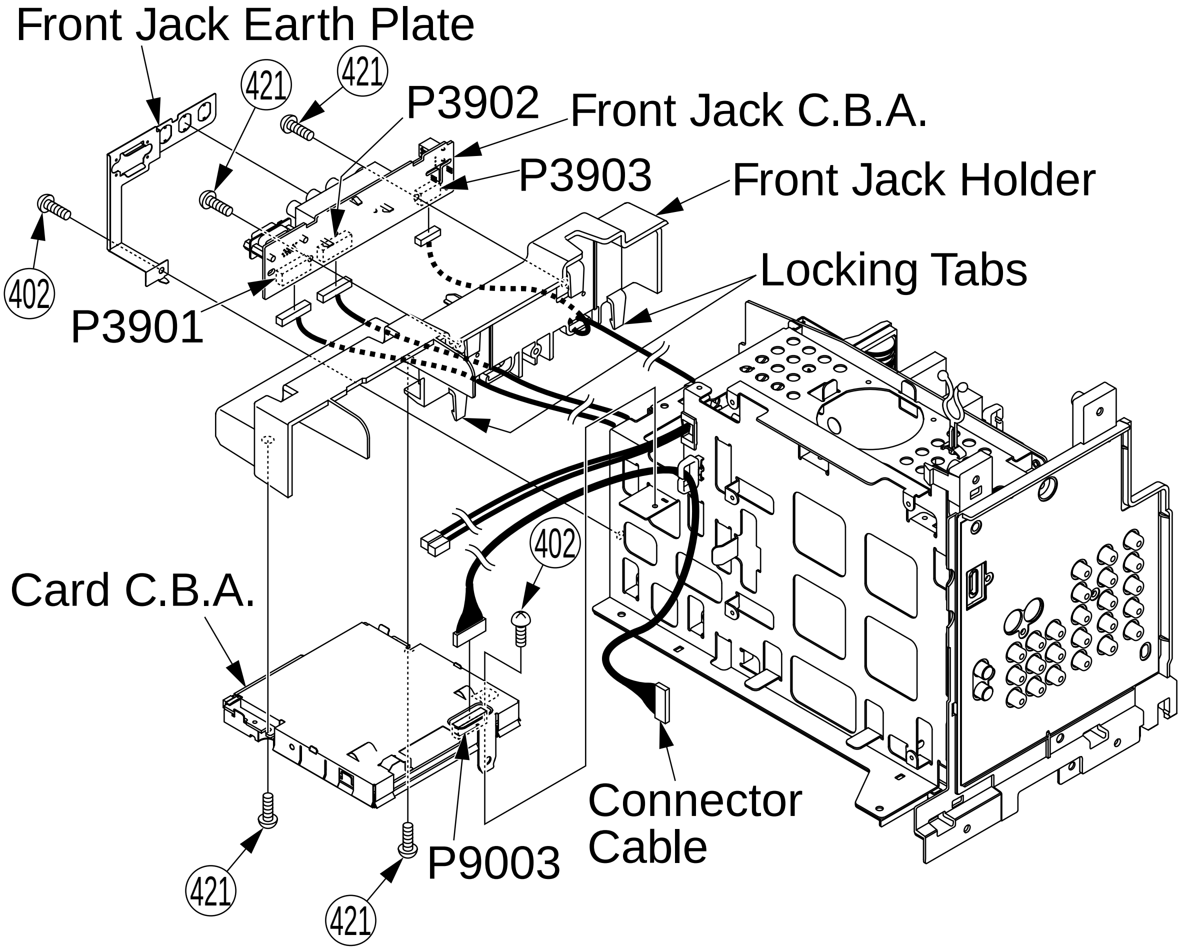


Fig. D4-1

Replacement Note of Card C.B.A.:

These parts will be necessary when replacing. Set aside, and keep and re-use.

- P9003 Connector Cable

3. 1) Release the AC Cord from the slot of the Rear Jack Holder.
   2) Remove the Rear Jack Holder by removing the 5 Screws (402) then releasing the 3 Locking Tabs.
   3) Remove the Screw (402), and pull off the Rear Jack C.B.A. (BtoB Connector P3501 is disconnected.)

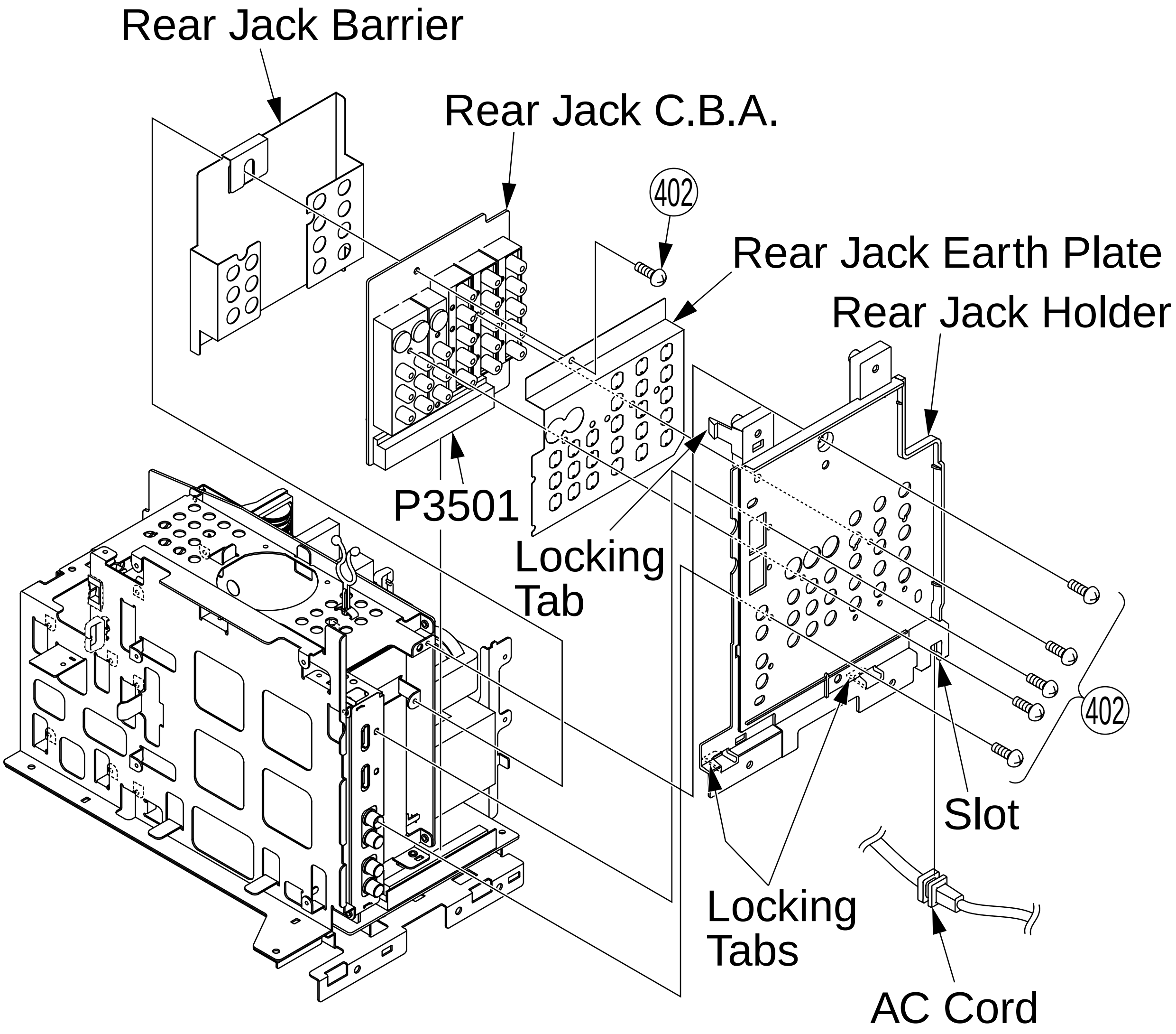
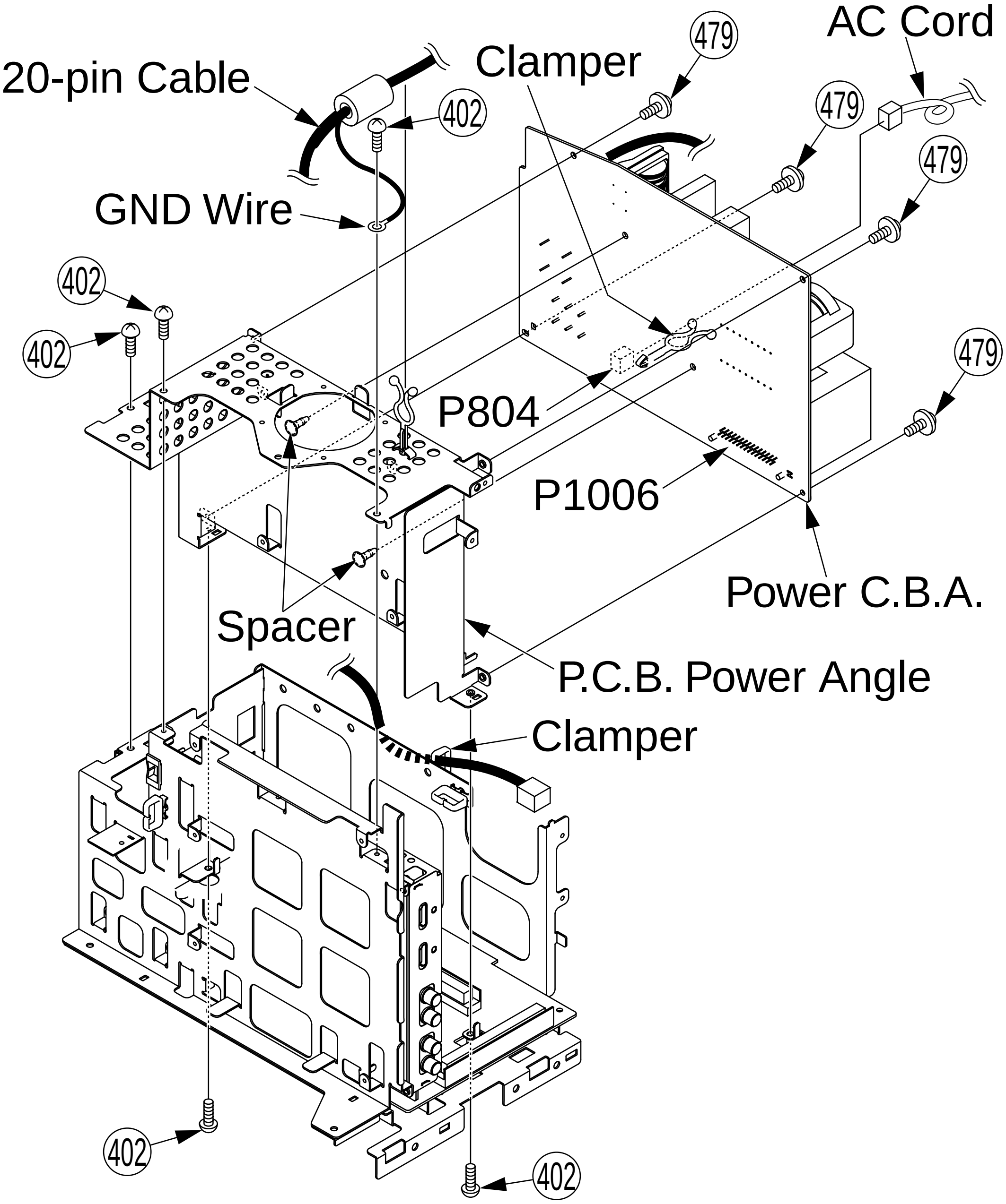

Rear Jack Barrier
Rear Jack C.B.A.
402
Rear Jack Earth Plate
Rear Jack Holder
P3501
Locking Tab
402
Slot
Locking Tabs
AC Cord

Fig. D4-2

Replacement Note of Rear Jack C.B.A.:
These parts will be necessary when replacing. Set aside, and keep and re-use.
- Rear Jack Earth Plate
- Rear Jack Barrier

4. 1) Remove the 5 Screws (402). Then, pull off the Power C.B.A. with the P.C.B. Power Angle while releasing the clamper. (BtoB Connector P1006 is disconnected.)
   2) Remove the Power C.B.A. by removing the 4 Screws (479).



AC Cord
479
Clamper
20-pin Cable
402
479
479
GND Wire
402
402
P804
479
P1006
Power C.B.A.
Spacer
P.C.B. Power Angle
Clamper
402
402

Fig. D4-3

5. 1) Remove the 2 Screws (402). Then, pull off the Main C.B.A. with the P.C.B. Main Angle. (BtoB Connector P3401 is disconnected.)
   2) Remove the Main C.B.A. by removing the 5 Screws (479).

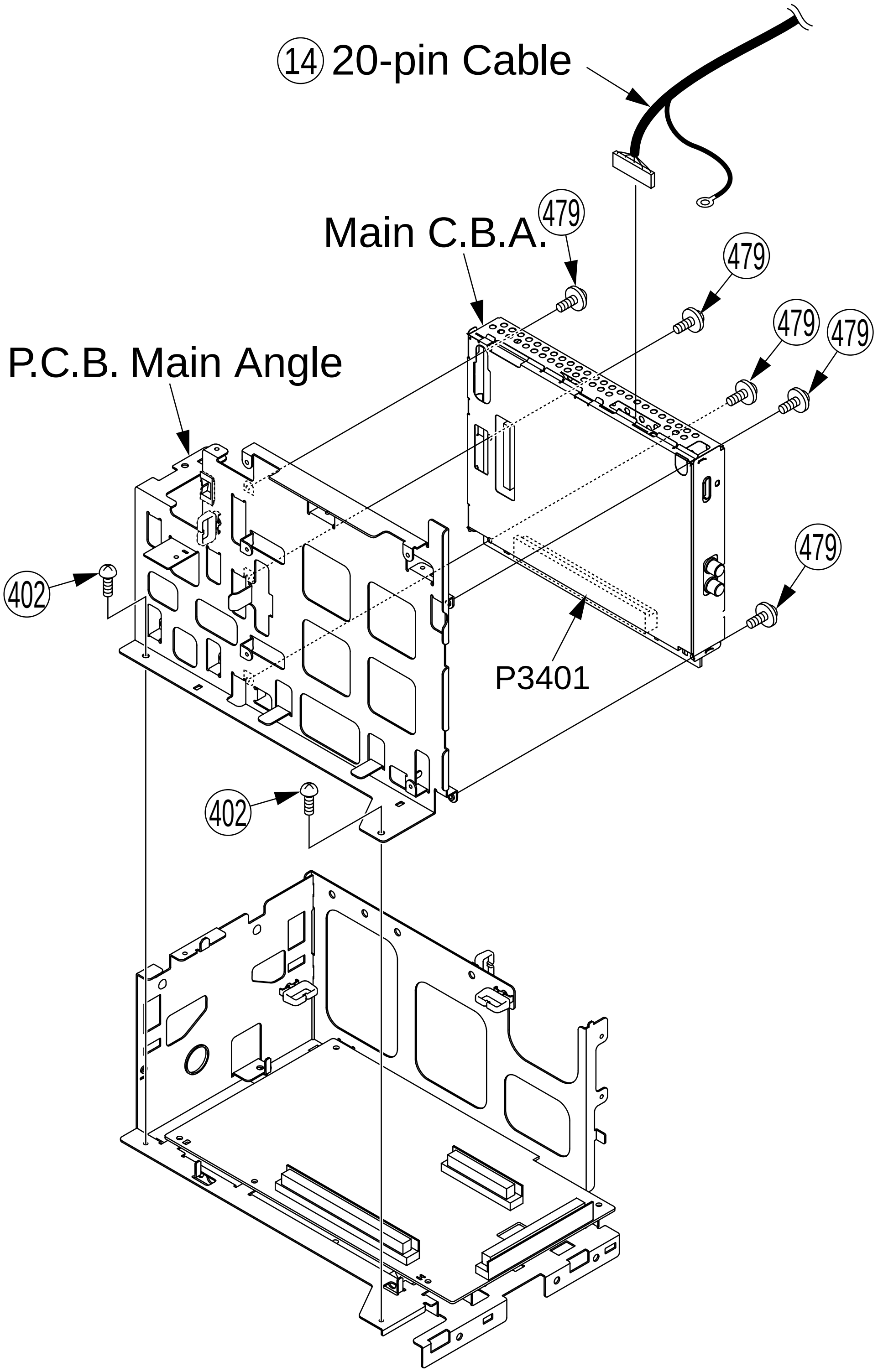

⑭ 20-pin Cable
Main C.B.A.
479
479
479
479
479
P.C.B. Main Angle
402
402
P3401

Fig. D4-4

Replacement Note of Main C.B.A.:
These parts will be necessary when replacing. Set aside, and keep and re-use.
- 20-pin Cable

6. Remove the Base C.B.A. by removing the 4 Screws (479) then releasing the clampers.

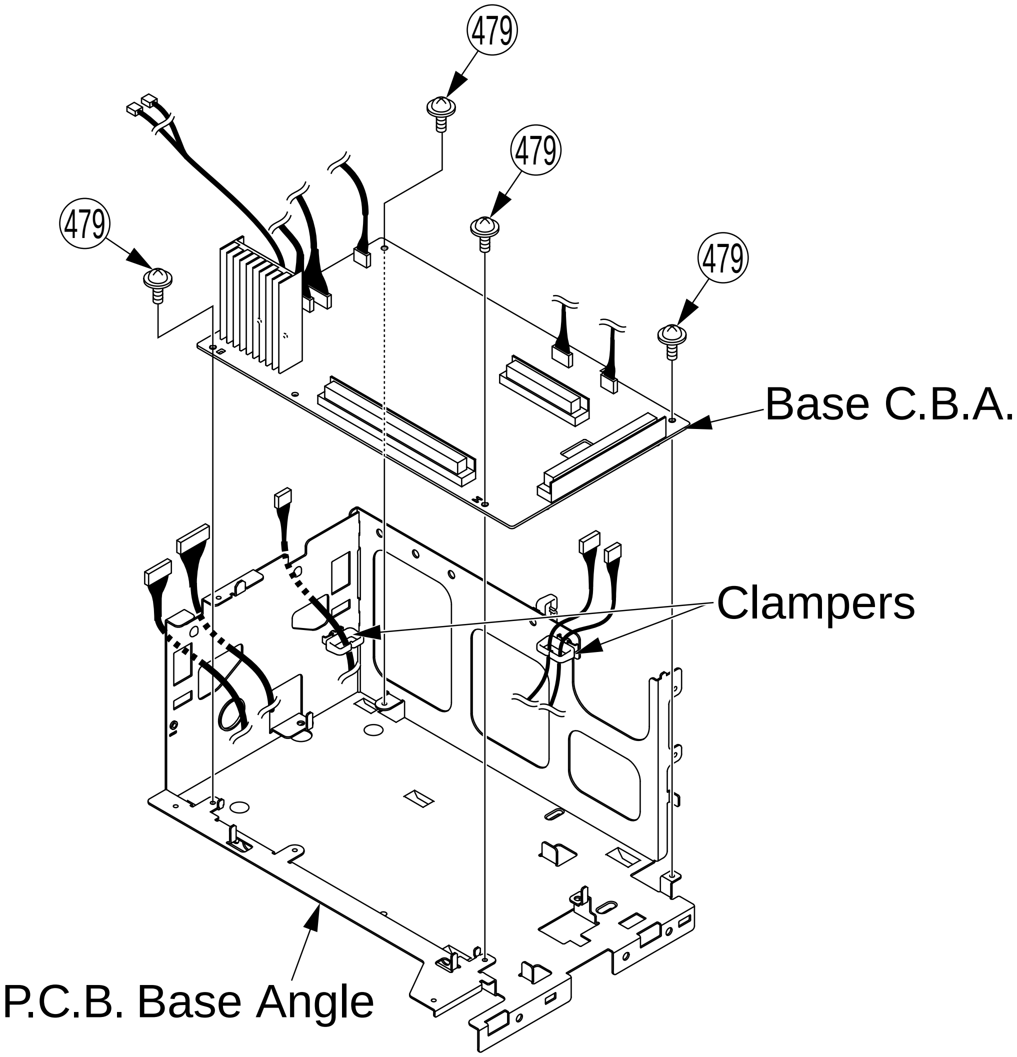

479
479
479
479
Base C.B.A.
Clampers
P.C.B. Base Angle

Fig. D4-5

REMOVAL OF THE SCREEN UNIT FROM THE DISPLAY

1. Remove the DISPLAY. Refer to Steps 1~2 in "REMOVAL OF THE BASE BODY UNIT."
2. **(PT-44LCX65-K/PT-52LCX65-K)**
   Remove the Screen Unit by removing the 16 Screws (401).

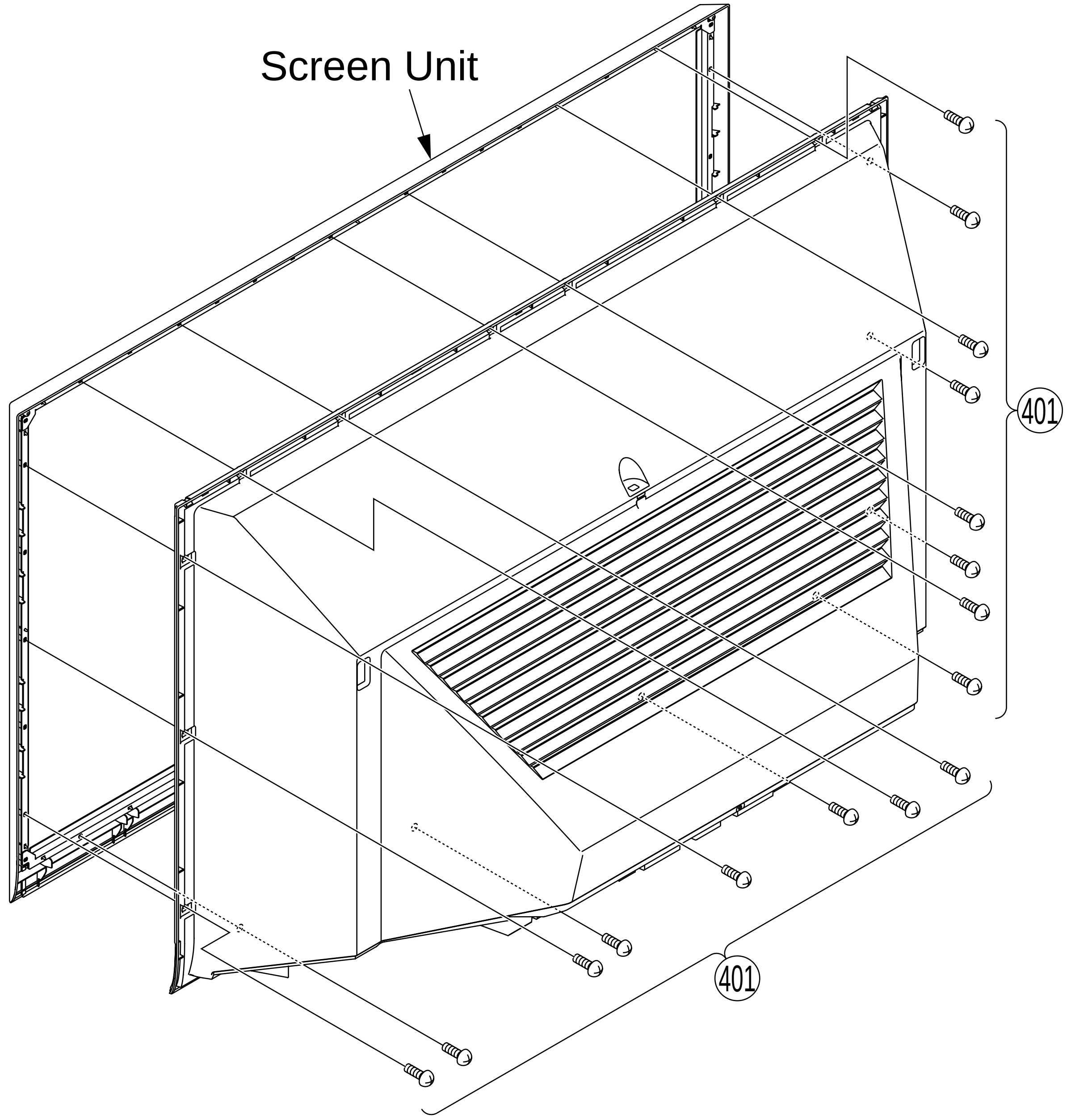


Fig. D5-2-1

(PT-61LCX65-K)
Remove the Screen Unit by removing the 17 Screws (401).

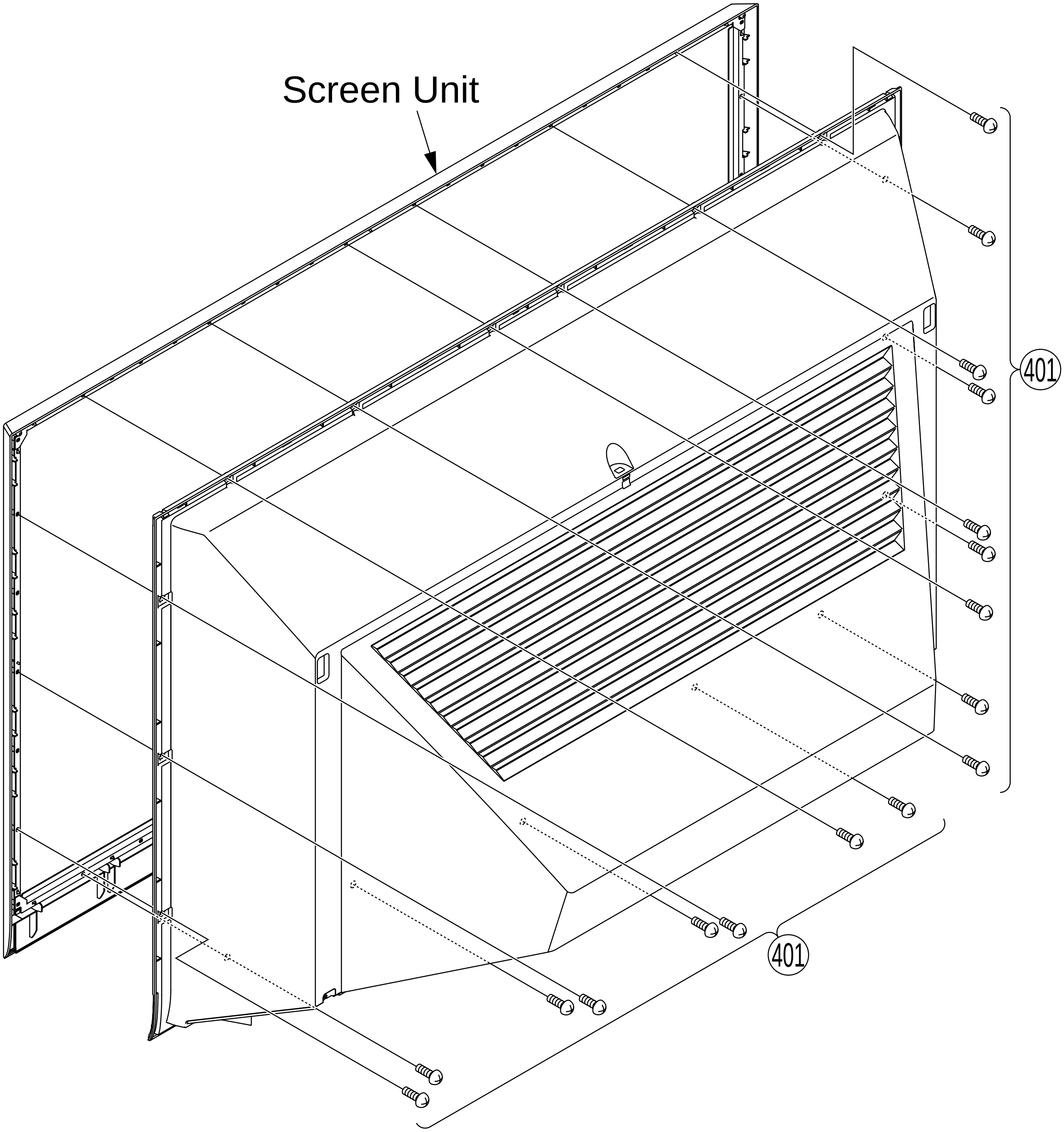

Screen Unit
401
401

Fig. D5-2-2

3. **(PT-44LCX65-K/PT-52LCX65-K)**
   Remove the 2 Screen Angle H Unit and the 2 Screen Angle V Unit by removing the 14 Screws (465), and remove the Fresnel Lens and the Lenticular Screen.

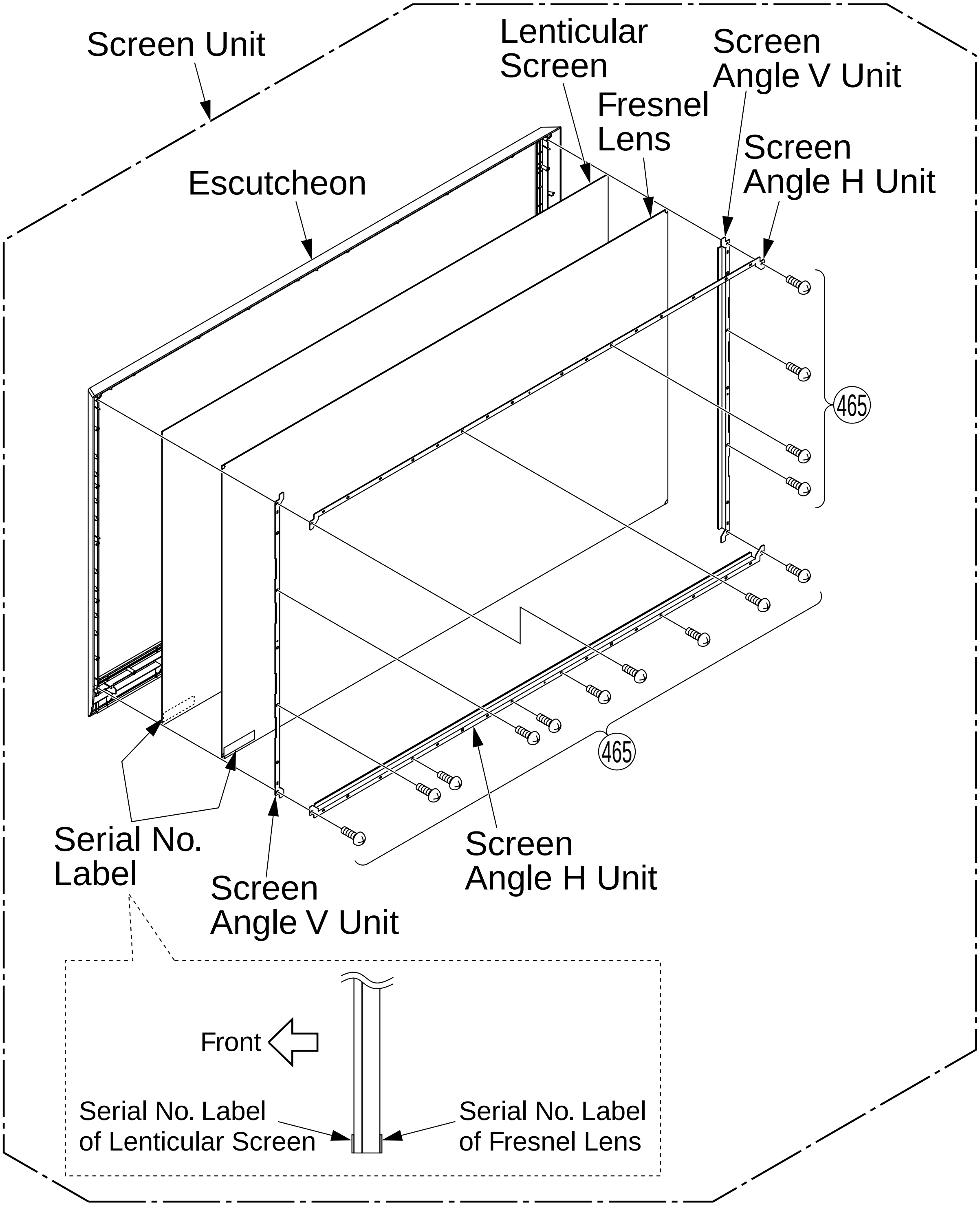

Screen Unit
Lenticular Screen
Screen Angle V Unit
Fresnel Lens
Screen Angle H Unit
Escutcheon
465
465
Serial No. Label
Screen Angle V Unit
Screen Angle H Unit
Front
Serial No. Label of Lenticular Screen
Serial No. Label of Fresnel Lens

Fig. D5-3-1

Reassembly Note:
Install them so that Serial No. Labels are on the each outside as shown above.

Replacement Note for Screen Unit:
The Screen Unit is supplied as a unit, or the individual parts (Fresnel Lens, Lenticular Screen) in the Screen Unit are also supplied. When replacing the Fresnel Lens and the Lenticular Screen, take care that dust, etc., does not adhere between the Fresnel Lens and the Lenticular Screen. Due to this risk, it is strongly recommended to replace the Screen Unit as a unit.

(PT-61LCX65-K)
Remove the 2 Screen Angle H Unit and the 2 Screen Angle V Unit by removing the 18 Screws (465), and remove the Fresnel Lens and the Lenticular Screen.

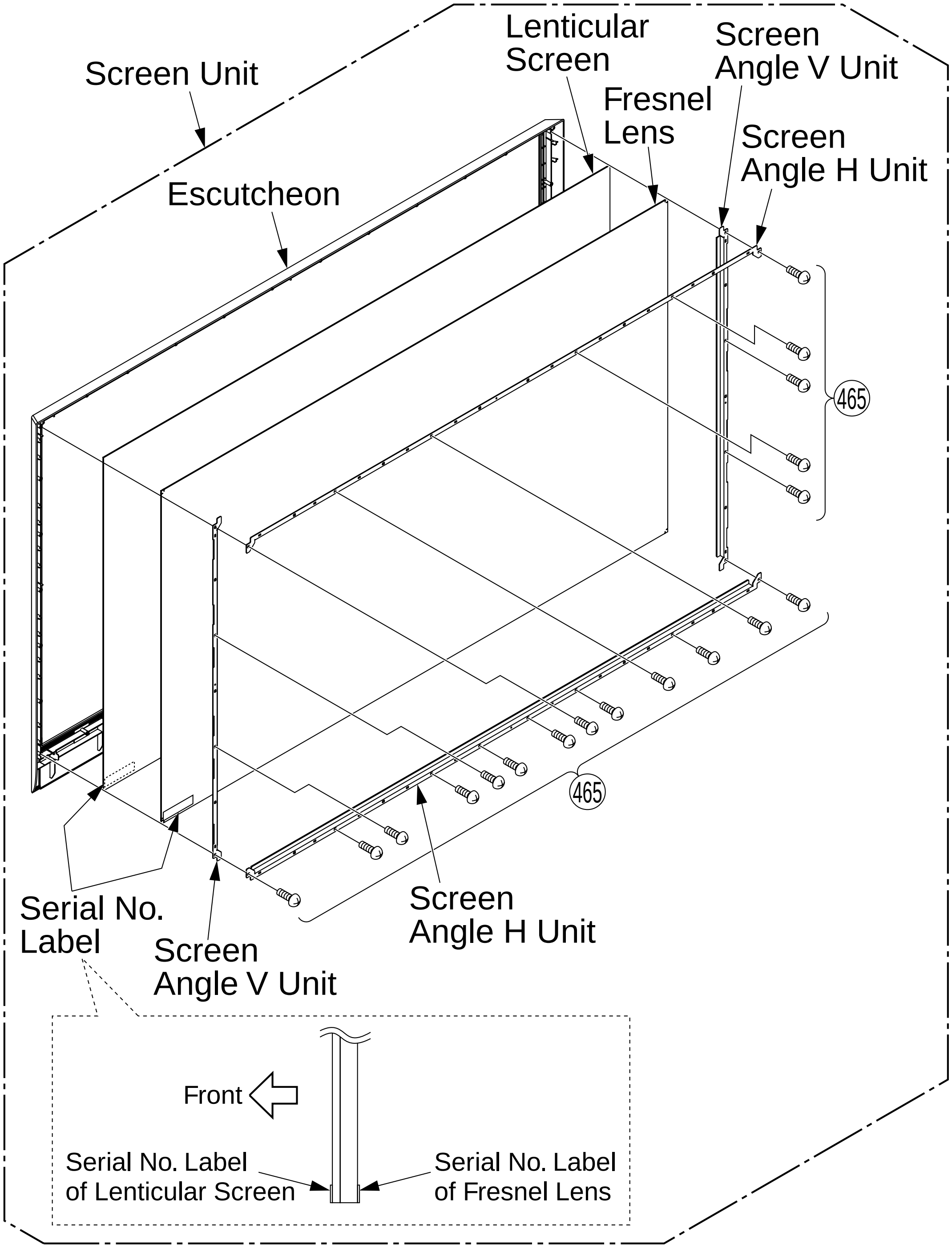

Lenticular Screen
Screen Angle V Unit
Screen Unit
Fresnel Lens
Screen Angle H Unit
Escutcheon
465
465
Serial No. Label
Screen Angle V Unit
Screen Angle H Unit
Front
Serial No. Label of Lenticular Screen
Serial No. Label of Fresnel Lens

Fig. D5-3-2

Reassembly Note:
Install them so that Serial No. Labels are on the each outside as shown above.

Replacement Note for Screen Unit:
The Screen Unit is supplied as a unit, or the individual parts (Fresnel Lens, Lenticular Screen) in the Screen Unit are also supplied. When replacing the Fresnel Lens and the Lenticular Screen, take care that dust, etc., does not adhere between the Fresnel Lens and the Lenticular Screen. Due to this risk, it is strongly recommended to replace the Screen Unit as a unit.

REMOVAL OF THE MIRROR FROM THE BACK COVER

1. Remove the Screen Unit. Refer to Steps 1~4 in "REMOVAL OF THE SCREEN UNIT FROM THE DISPLAY."
2. **(PT-44LCX65-K/PT-52LCX65-K)**
   1) Remove the 2 Mirror Holder H and the 2 Mirror Holder V Unit **(PT-52LCX65-K)** by removing the 4 (or 8: **PT-52LCX65-K**) Screws (401).
   2) Remove the Mirror from the top by releasing the Back Cover slots.

   Note: Be careful that the Mirror does not fall down when removing.

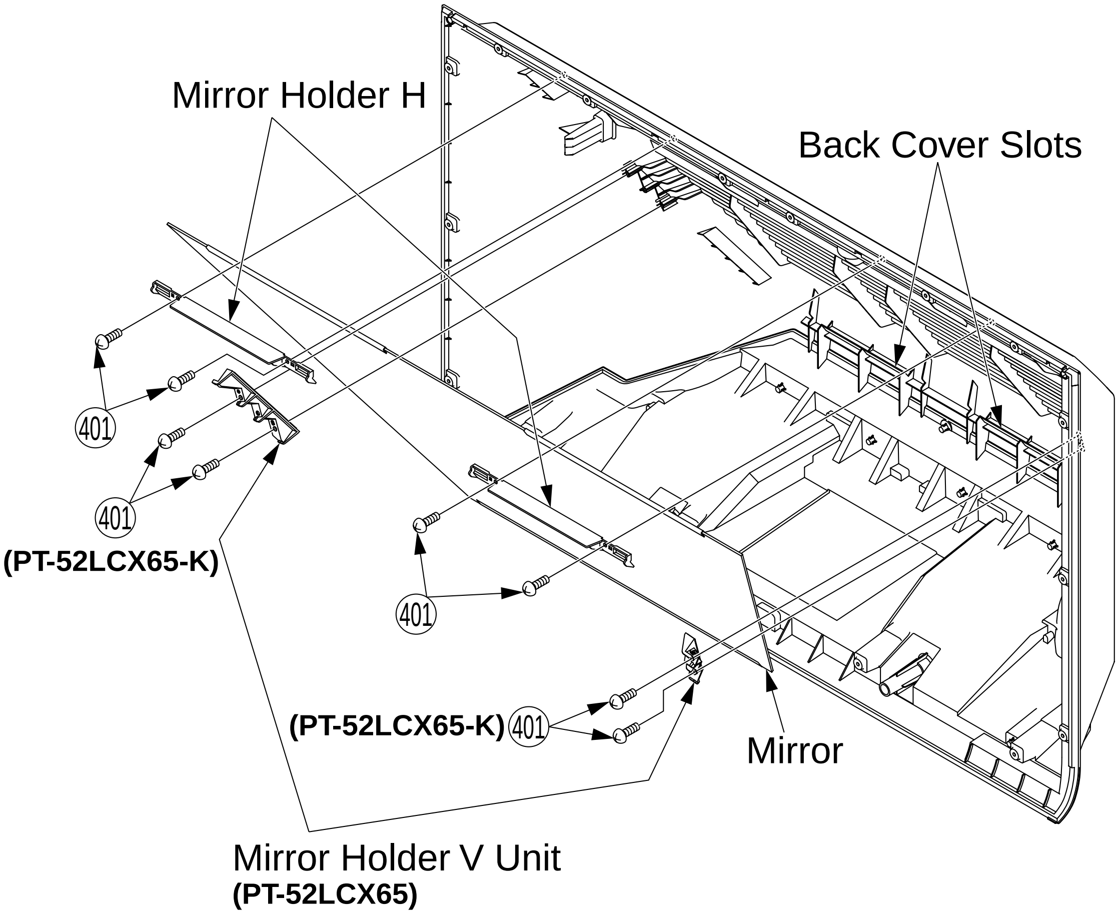
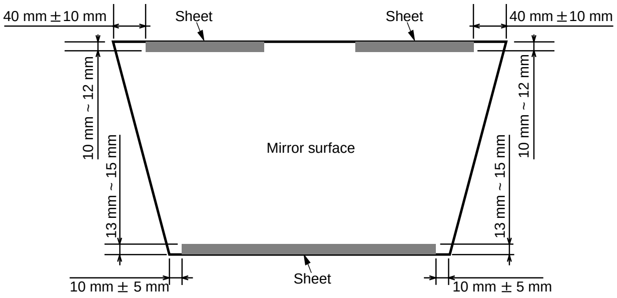

Mirror Holder H
Back Cover Slots
401
401
(PT-52LCX65-K)
401
(PT-52LCX65-K)
401
Mirror
Mirror Holder V Unit
(PT-52LCX65)

Fig. D6-1-1

Reassembly Notes for Mirror:
Install the Mirror as following procedures:

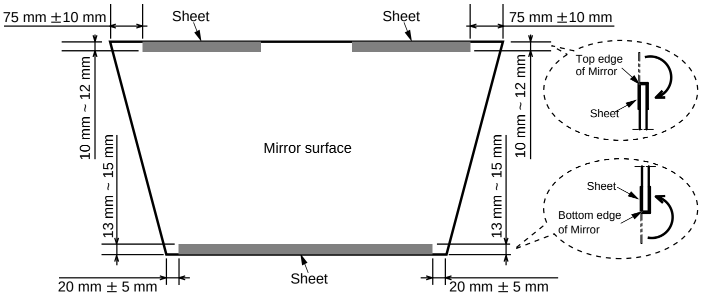
1) Place the 3 sheets on the top and bottom edges of the Mirror.

(PT-44LCX65-K)


40 mm ±10 mm
Sheet
Sheet
40 mm ±10 mm
10 mm ~ 12 mm
13 mm ~ 15 mm
Mirror surface
10 mm ~ 12 mm
13 mm ~ 15 mm
10 mm ± 5 mm
Sheet
10 mm ± 5 mm

<Front View>

(PT-52LCX65-K)


75 mm ±10 mm
Sheet
Sheet
75 mm ±10 mm
Top edge of Mirror
Sheet
10 mm ~ 12 mm
13 mm ~ 15 mm
Mirror surface
10 mm ~ 12 mm
13 mm ~ 15 mm
Sheet
Bottom edge of Mirror
20 mm ± 5 mm
Sheet
20 mm ± 5 mm

<Front View>

2) Hold the sheet portions of the Mirror, and insert the Mirror from the top into the Back Cover slots carefully. When handling the Mirror, do not touch the Mirror surface.
3) Install the 2 Mirror Holder H and the 2 Mirror Holder V Unit **(PT-52LCX65-K)** on the Mirror and tighten the 4 (or 8: **PT-52LCX65-K**) Screws (401).

(PT-61LCX65-K)

1) Remove the 3 Mirror Holder H and the 2 Mirror Holder V Unit by removing the 10 Screws (401).
2) Remove the Mirror from the top by releasing the Back Cover slots.

Note: Be careful that the Mirror does not fall down when removing.

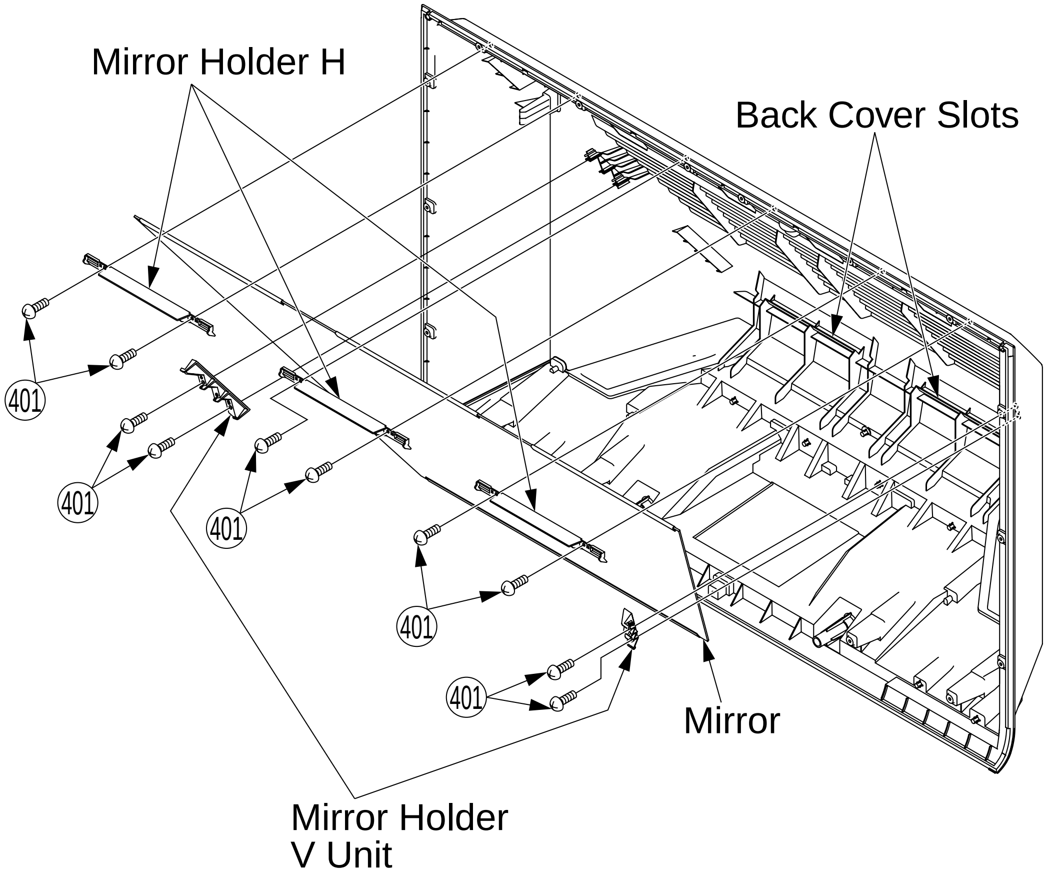
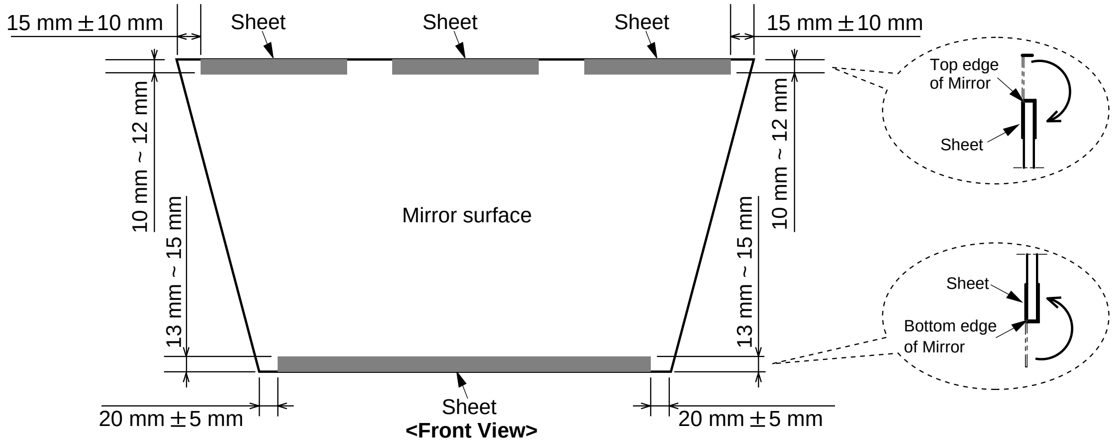

Mirror Holder H
Back Cover Slots
401
401
401
401
401
Mirror
Mirror Holder V Unit

Fig. D6-1-2

Reassembly Notes for Mirror:
Install the Mirror as following procedures:

1) Place the 4 sheets on the top and bottom edges of the Mirror.


15 mm ± 10 mm
Sheet
Sheet
Sheet
15 mm ± 10 mm
10 mm ~ 12 mm
10 mm ~ 12 mm
Top edge of Mirror
Sheet
Mirror surface
13 mm ~ 15 mm
13 mm ~ 15 mm
Sheet
Bottom edge of Mirror
20 mm ± 5 mm
Sheet
<Front View>
20 mm ± 5 mm

2) Hold the sheet portions of the Mirror, and insert the Mirror from the top into the Back Cover slots carefully. When handling the Mirror, do not touch the Mirror surface.
3) Install the 3 Mirror Holder H and the 2 Mirror Holder V Unit on the Mirror and tighten the 10 Screws (401).

REMOVAL OF THE OPERATION C.B.A. FROM THE CABINET

1. Remove the Display and the Front Cover Unit. Refer to Step 1 ~ 2 in "REMOVAL OF THE BASE BODY UNIT."
2. 1) Disconnect Connector P6701.
   2) Remove the Operation Holder Unit with the Operation C.B.A. by removing the 2 Screws (401).
   3) Remove the Operation C.B.A. by removing the 2 Screws (421).

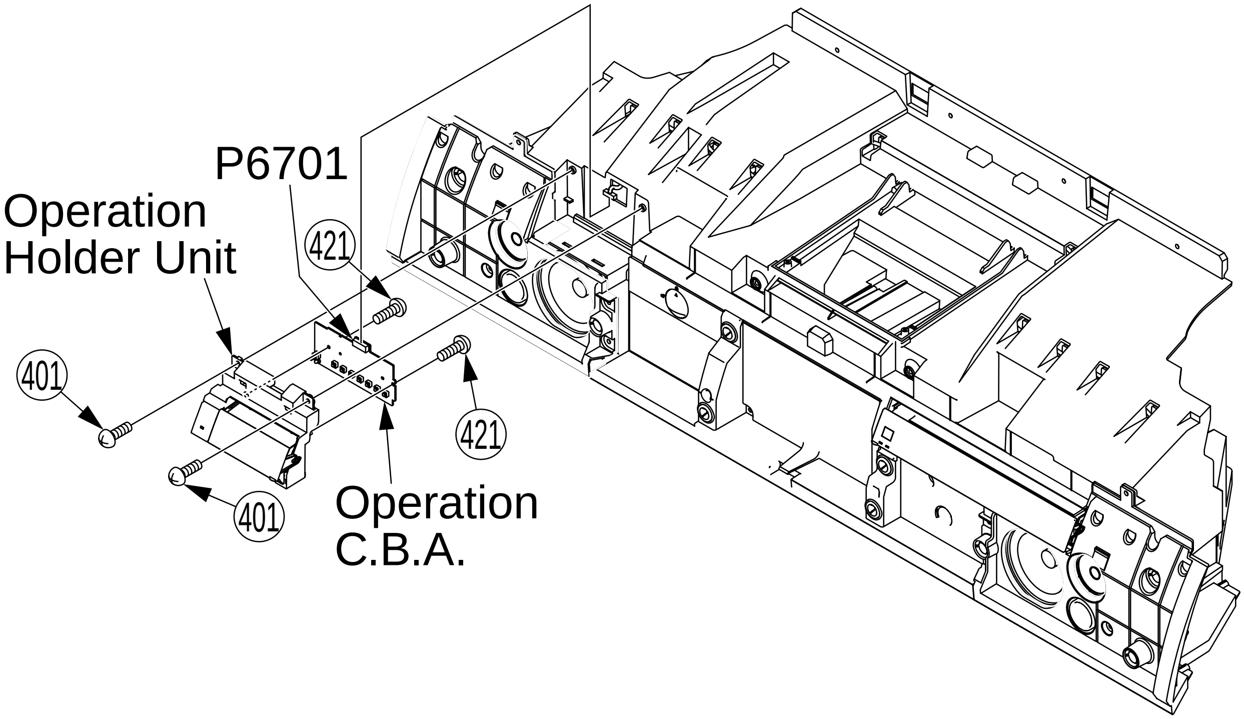

P6701
Operation Holder Unit
421
401
421
401
Operation C.B.A.

Fig. D7

REMOVAL OF THE BALLAST SHIELD CASE TOP AND THE BALLAST SHIELD CASE BOTTOM

1. Remove the Ballast C.B.A. Refer to Steps 1~3 in "REMOVAL OF THE BALLAST C.B.A. AND THE PROJECTION UNIT FROM THE CABINET."
2. 1) Remove the Ballast Shield Case Top by removing the Screw (452).
   2) Remove the Ballast Shield Case Bottom by removing the 2 Screws (411), and releasing the 3 Spacers.

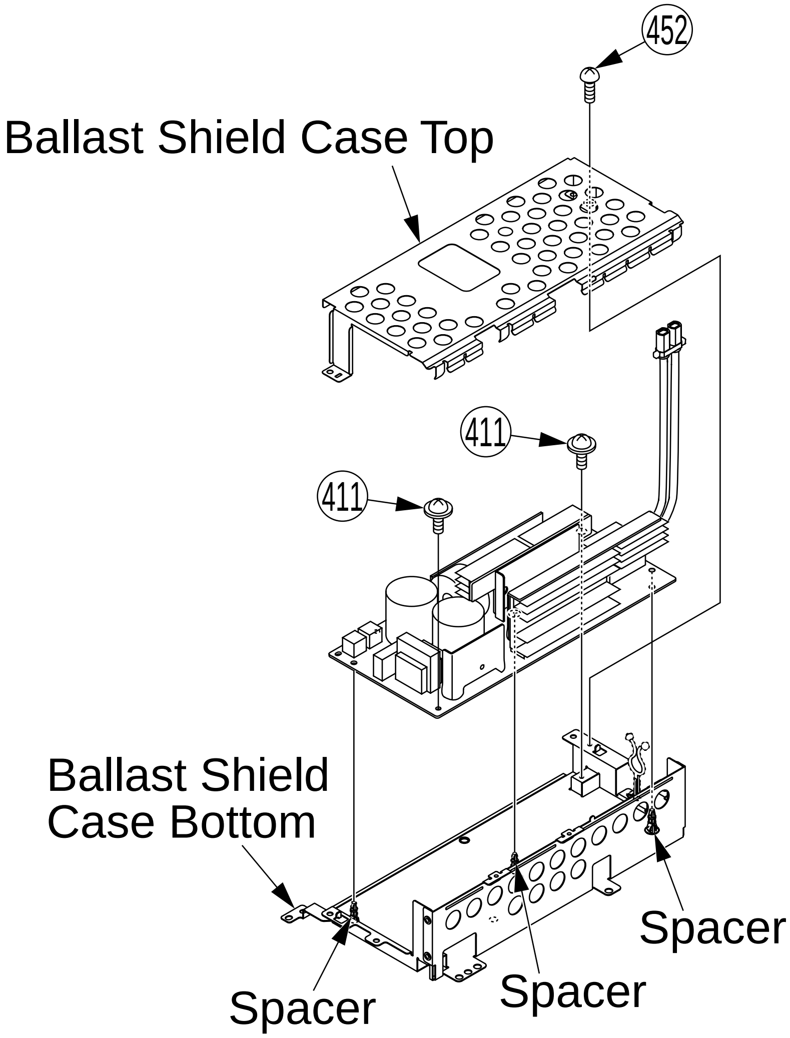

452
Ballast Shield Case Top
411
411
Ballast Shield
Case Bottom
Spacer
Spacer
Spacer

Fig. D8

6.2. PROJECTION SECTION

PROJECTION SECTION

DISASSEMBLY METHOD OF PROJECTION UNIT

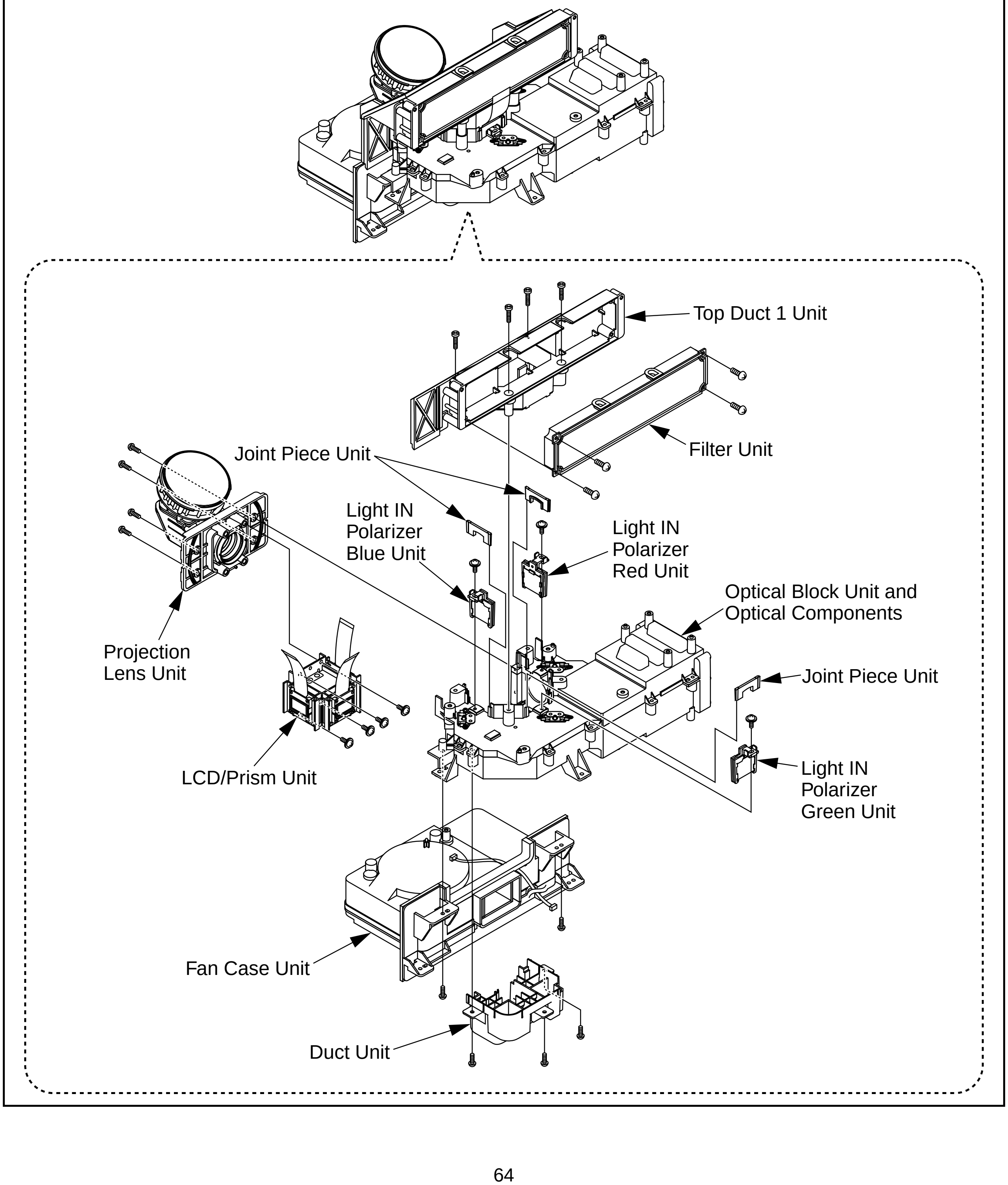
When reassembling, perform the step (s) in the reverse order. Bend, route and dress the wires as they were originally.

Note :

a. Place a cloth or some other soft material under the P.C. Boards or Unit to prevent damage.
b. When reinstalling, ensure that the connectors are connected firmly and electrical components have not been damaged.
c. Do not supply power to the unit during disassembly and reassembly.

Note:

When servicing these inner parts (LCD/Prism Unit, Light IN Polarizer Unit, etc.) of the Projection Unit, it is strongly recommended to replace at clean room or clean bench.


Top Duct 1 Unit
Filter Unit
Joint Piece Unit
Light IN Polarizer Blue Unit
Light IN Polarizer Red Unit
Optical Block Unit and Optical Components
Projection Lens Unit
Joint Piece Unit
LCD/Prism Unit
Light IN Polarizer Green Unit
Fan Case Unit
Duct Unit

REMOVAL OF THE LCD DRIVE C.B.A.

1. Peel the Seal Tape 4.

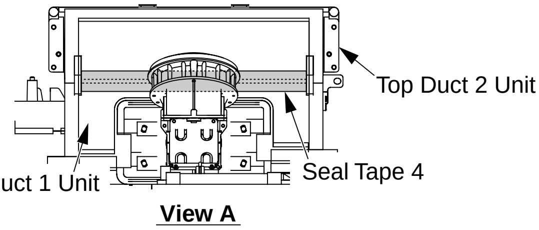

Top Duct 2 Unit
Seal Tape 4
Top Duct 1 Unit
View A

Fig. P1-1

2. Remove the Top Duct 2 Unit by removing the 4 Screws (421).
3. Remove the Filter Unit by removing the 4 Screws (421).
   Note: Do not touch the Air Filter.
4. Remove the Top Duct 1 Unit by removing the 4 Screws (475).
5. 1) Disconnect Connector P2302, P2303, P2902, P2903, P2502.
   2) Disconnect Connectors P2001, P2002, P2003 (LCD Panel Flexible Cable).
   Note: Take extreme care not to damage the LCD Panel Flexible Cable.
6. Remove the LCD Drive C.B.A. and the GND Wire by removing the 4 Screws (421).
7. Remove the LCD Drive Shield Case Top and the LCD Drive Shield Case Bottom.

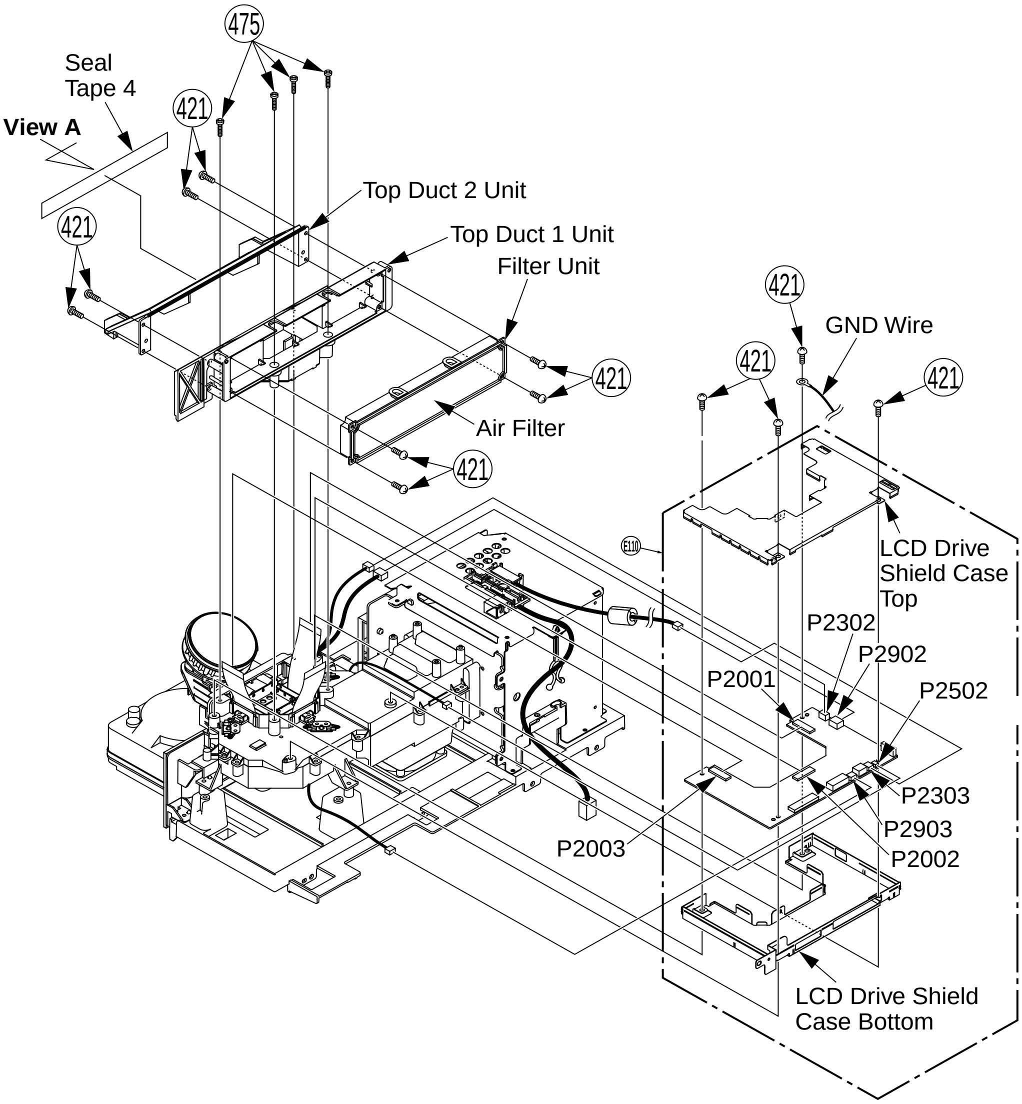

475
Seal
Tape 4
421
View A
Top Duct 2 Unit
421
Top Duct 1 Unit
Filter Unit
421
GND Wire
421
421
421
Air Filter
421
E110
LCD Drive
Shield Case
Top
P2302
P2902
P2001
P2502
P2303
P2903
P2002
P2003
LCD Drive Shield
Case Bottom

Fig. P1-2

REMOVAL OF THE LIGHT IN POLARIZER UNITS

1. Remove the LCD Drive C.B.A. Refer to Steps 1~7 in "REMOVAL OF THE LCD DRIVE C.B.A."
2. Remove the 3 Joint Piece Units.
3. Remove the Light IN Polarizer Red, Green, Blue Unit by removing the 3 Screws (423).
   Note:
   1. Use extreme caution not to damage the Light IN Polarizer Units (Red, Green, Blue), when servicing.
   2. Clean the Polarizer Unit if necessary. Refer to "CLEANING METHOD" in SERVICE NOTES.

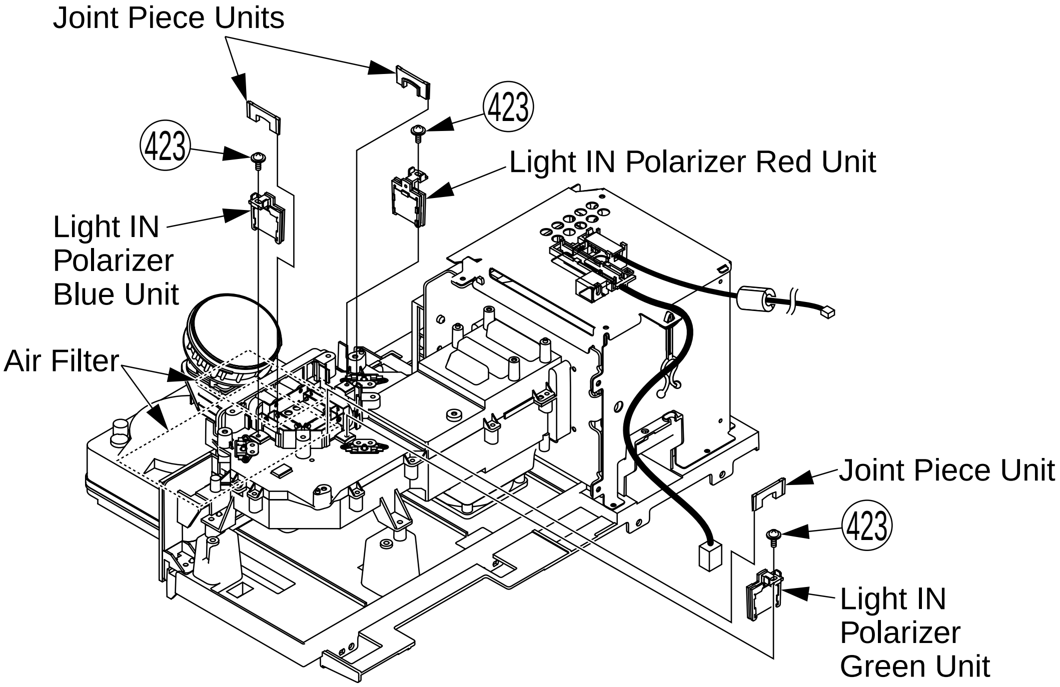

Joint Piece Units
423
423
Light IN Polarizer Red Unit
Light IN Polarizer Blue Unit
Air Filter
Joint Piece Unit
423
Light IN Polarizer Green Unit

Fig. P2-1

Reassembly Note for the Light IN Polarizer Unit (Red, Green, Blue):

1) After replacing the Light IN Polarizer Units, be sure to perform Polarizer Adjustment.
2) Make sure of the mark color to distinguish the Light IN Polarizer Units (Polarizer).
   Light IN Polarizer Red Unit has a Plate (Polarizer).
   Light IN Polarizer Green Unit has 2 Plates (Polarizer and ND Filter).
   Light IN Polarizer Blue Unit has 2 Plates (Polarizer and UV Cut Filter)

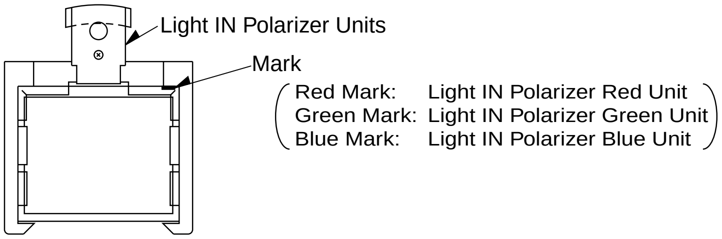

Light IN Polarizer Units
Mark
Red Mark: Light IN Polarizer Red Unit
Green Mark: Light IN Polarizer Green Unit
Blue Mark: Light IN Polarizer Blue Unit

Fig. P2-2

REMOVAL OF THE LCD/PRISM UNIT, PROJECTION LENS UNIT, FAN CASE UNIT (FAN 1), FAN 2

1. Remove the LCD Drive C.B.A. Refer to Steps 1~7 in "REMOVAL OF THE LCD DRIVE C.B.A."
2. Remove the Engine Frame by removing the 8 Screws (421).
   Note: After removing the Engine Frame, the Fan 2 can be removed.

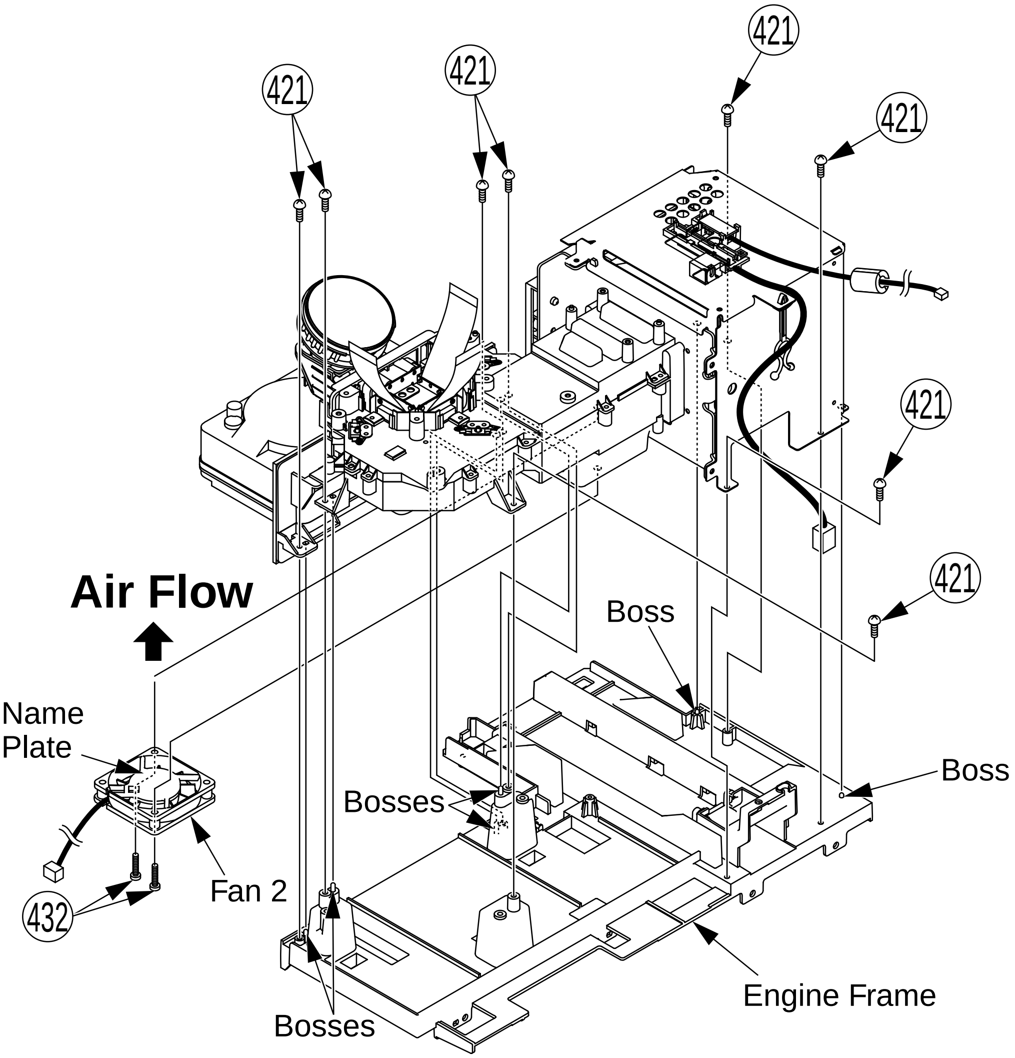

421
421
421
421
421
421
Air Flow
Boss
Name Plate
Boss
Bosses
Fan 2
432
Engine Frame
Bosses

Fig. P3-1

Reassembly Note for Fan 2:
Install the Fan 2 with the 2 Screws (432) so that the name plate (manufacture’s name etc.) face in (not visible from the outside).

3. Remove the Duct Unit by removing the 3 Screws (421).
   Note:
   The Joint Piece Unit may be come off when placing down the Optical Block Unit.
4. Remove the Fan Case Unit by removing the 2 Screws (421).
   Note:
   Do not touch the Air Filter.
5. Remove both the Projection Lens Unit and the LCD/Prism Unit by removing the 4 Screws (434).
   Note:
   1. Use extreme caution when handling the LCD/Prism Unit to avoid damage, dust, spots (especially fingerprints), etc.
   2. Clean the LCD/Prism Unit if necessary. Refer to "CLEANING METHOD" in SERVICE NOTES.

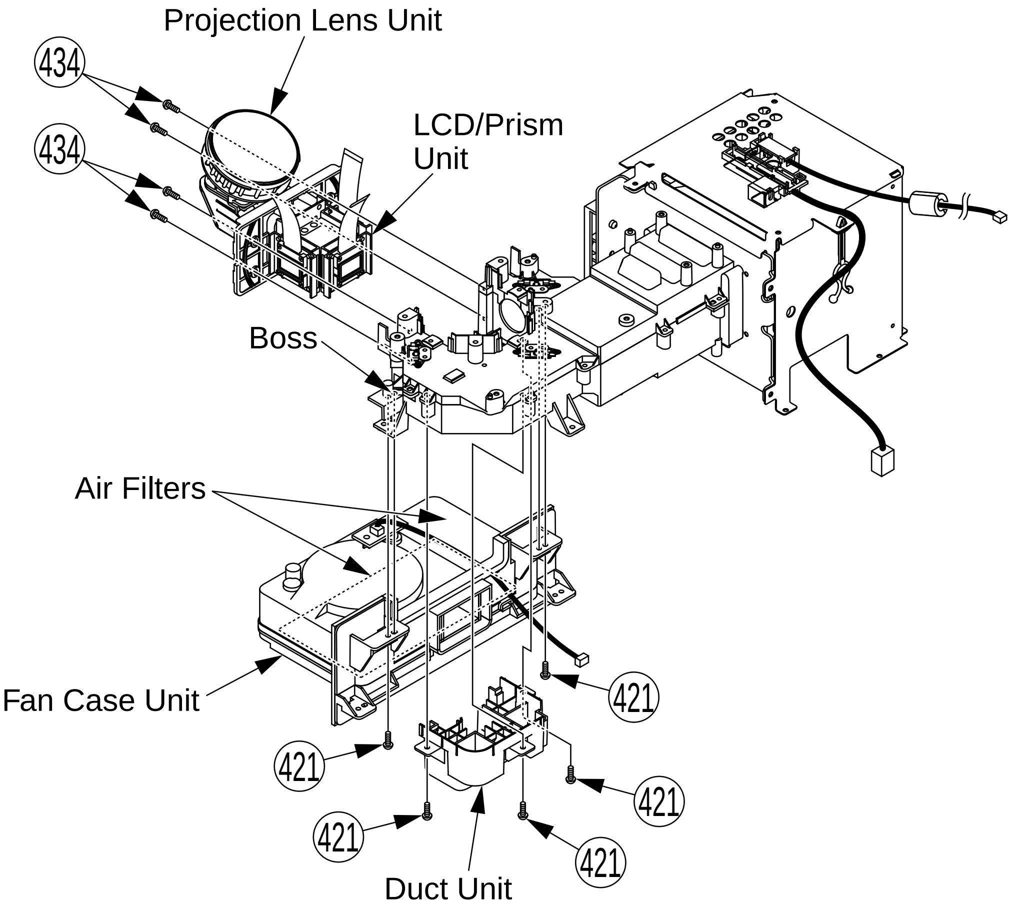

Projection Lens Unit
434
434
LCD/Prism Unit
Boss
Air Filters
Fan Case Unit
421
421
421
421
421
Duct Unit

Fig. P3-2

6. Remove the LCD/Prism Unit from the Projection Lens Unit by removing the 4 Screws (423).

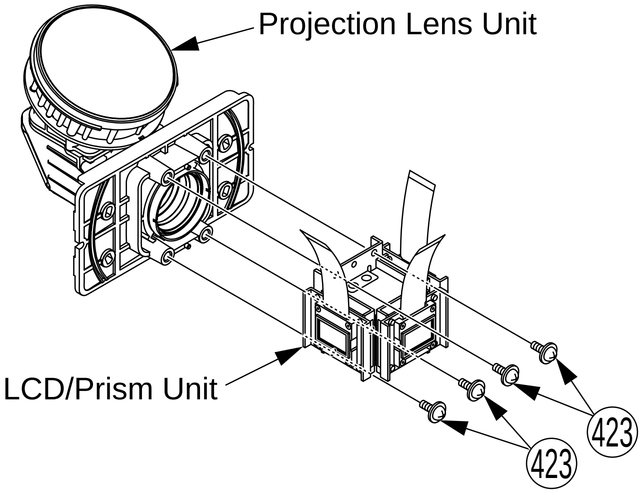
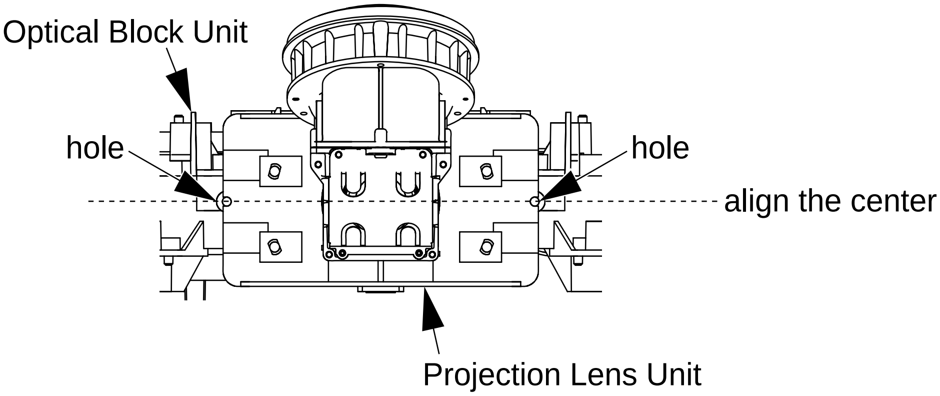

Projection Lens Unit
LCD/Prism Unit
423
423

Fig. P3-3

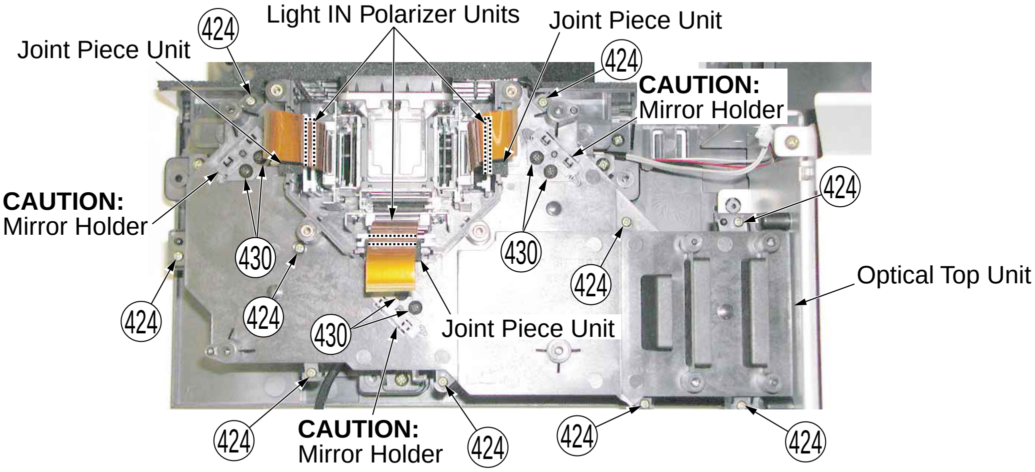
Reassembly Note for LCD/Prism Unit and Projection Lens Unit:

1. Be sure to install the LCD/Prism Unit and the Projection Lens Unit before installing the Fan Case Unit. Otherwise, the Fan Case Sponge, etc. will not fit properly with the Projection Lens Unit.
2. Be sure to install the LCD/Prism Unit and the Projection Lens to the Optical Block Unit as shown.


Optical Block Unit
hole
hole
align the center
Projection Lens Unit

REMOVAL OF THE P/S CONVERTER, THE FIELD LENS, THE RELAY LENS, THE CONDENSER LENS, THE FULL MIRRORS, THE DICHROIC MIRRORS, AND THE INTEGRATOR

1. Remove the LCD Drive C.B.A. Refer to Steps 1~7 in "REMOVAL OF THE LCD DRIVE C.B.A."
2. **Remove the 3 Mirror Holders by the 6 Screws (430) before removing the Optical Top Unit.**
3. Remove the Optical Top Unit with the Light IN Polarizer Units and the Joint Piece Units by removing the 10 Screws (424).
   Note:
   1. Use extreme caution not to damage the Light IN Polarizer Units (Red, Green, Blue), when servicing.
   2. Take extreme care not to damage the LCD Panel Flexible Cable.
   3. Clean the Polarizer Unit if necessary. Refer to "CLEANING METHOD" in SERVICE NOTES.


424
Light IN Polarizer Units
Joint Piece Unit
Joint Piece Unit
424
CAUTION:
Mirror Holder
CAUTION:
Mirror Holder
424
430
430
Optical Top Unit
424
424
424
430
Joint Piece Unit
424
CAUTION:
Mirror Holder
424
424
424

CAUTION:
Remove the 3 Mirror Holders by the 6 Screws (430) before removing the Optical Top Unit.

Fig. P5-1

4. Pull out the P/S Converter, the Field Lens Red, Green, Blue, the Relay Lens 1, 2, the Condenser Lens, the Full Mirrors, the Dichroic Mirrors, the Integrator.

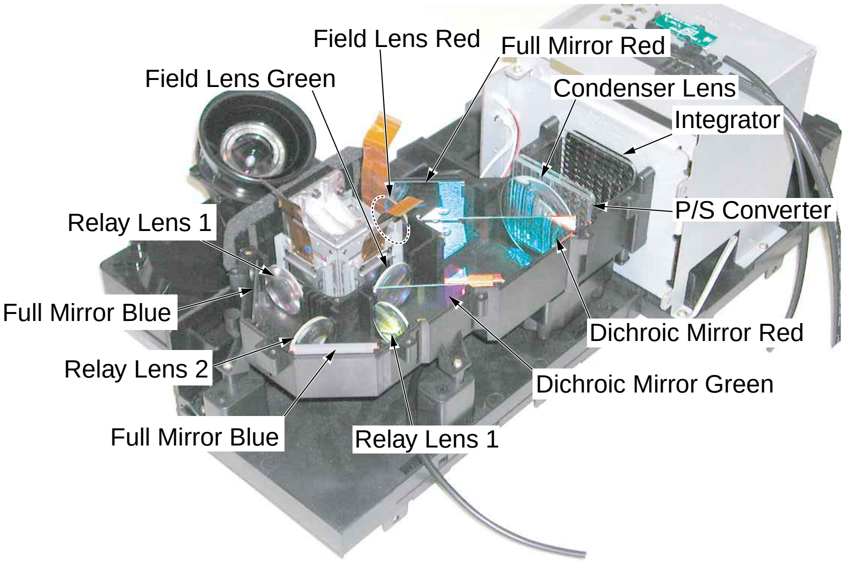

Field Lens Red
Full Mirror Red
Field Lens Green
Condenser Lens
Integrator
Relay Lens 1
P/S Converter
Full Mirror Blue
Dichroic Mirror Red
Relay Lens 2
Dichroic Mirror Green
Full Mirror Blue
Relay Lens 1

Fig. P5-2

Note:
1. Use extreme caution not to damage the Optical components such as Mirrors, Lens etc., when servicing.
2. Clean these optical components if necessary. Refer to "CLEANING METHOD" in SERVICE NOTES.

Reassembly Note for Mirror Holder:
After installing the Optical Top Unit, be sure to install the Mirror Holders to set the Full Mirror Red, Blue, and the Dichroic Mirror Green in correct position as shown.

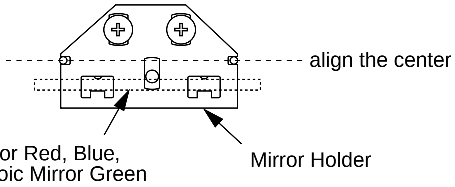
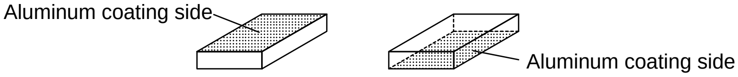

align the center
Full Mirror Red, Blue, or Dichroic Mirror Green
Mirror Holder

Fig. P5-3

Reassembly Note for optical components:

1. Once the Optical Top Unit is removed, perform Full Mirror and Polarizer Adjustment.
2. When mounting the inside components (the Field Lens, the Relay Lens, the Condenser Lens, the Full Mirrors, the Dichroic Mirrors, the Integrator and the P/S Converter), be sure to mount them in the correct position.
3. The P/S Converter consists of 2 layers. One has round corners and the other has sharp corners. The round corner side should be Lamp Unit side.
4. To distinguish the Field Lens Red from the Field Lens Green, put the Field Lens on white paper (Flat Side facing down). Color is visible when viewed from the top. The Field Lens Red looks red. The Field Lens Green looks blue.
5. To distinguish the coating side of the Full Mirror Red, see below.


Aluminum coating side
Aluminum coating side

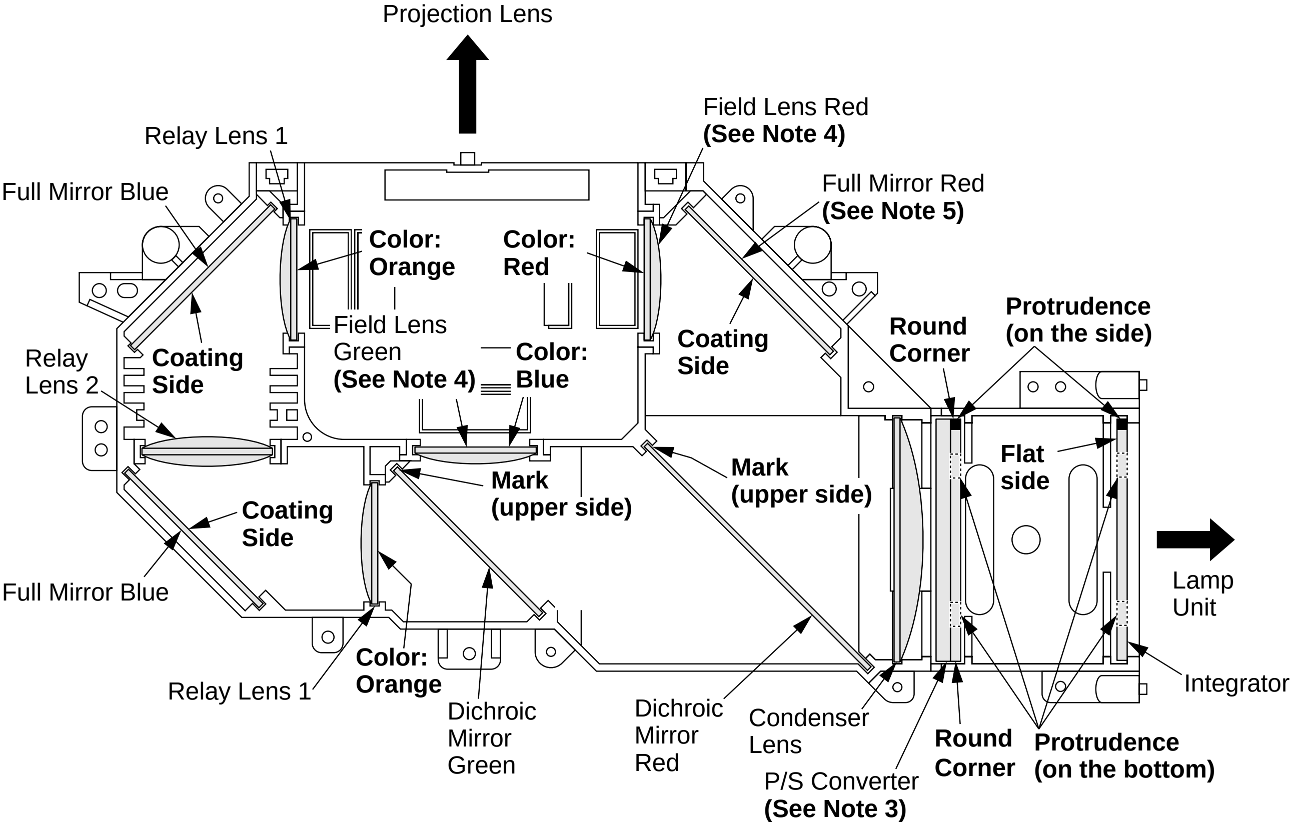
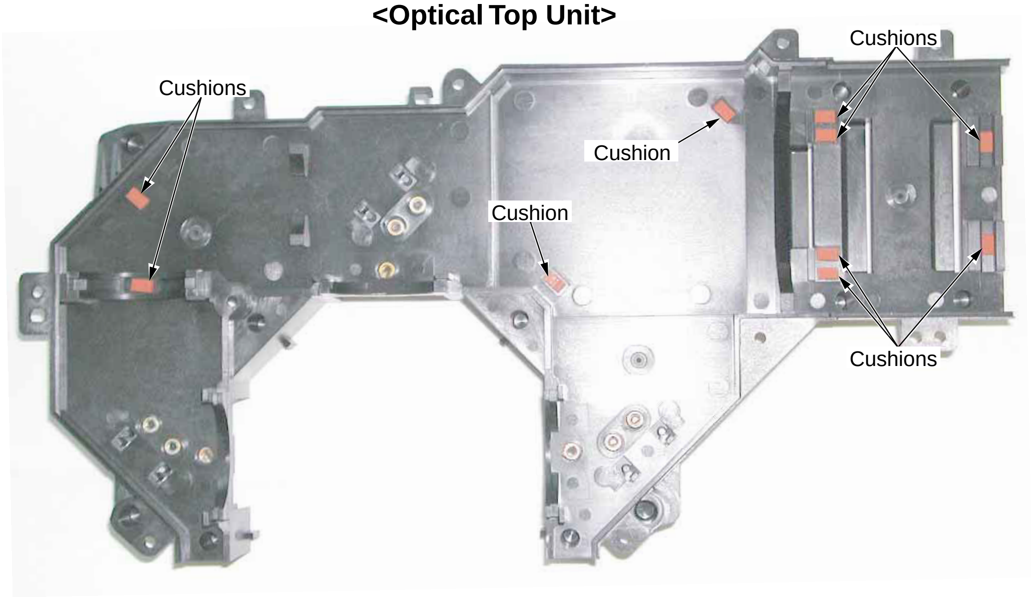

Projection Lens
Relay Lens 1
Field Lens Red
(See Note 4)
Full Mirror Blue
Full Mirror Red
(See Note 5)
Color: Orange
Color: Red
Field Lens Green
(See Note 4)
Color: Blue
Relay Lens 2
Coating Side
Coating Side
Round Corner
Protrudence (on the side)
Flat side
Mark (upper side)
Mark (upper side)
Coating Side
Full Mirror Blue
Lamp Unit
Integrator
Relay Lens 1
Color: Orange
Dichroic Mirror Green
Dichroic Mirror Red
Condenser Lens
P/S Converter
(See Note 3)
Round Corner
Protrudence (on the bottom)

Fig. P5-4

6. Location of Cushions

<Optical Top Unit>


Cushions
Cushions
Cushion
Cushion
Cushions

<Optical Bottom Unit>

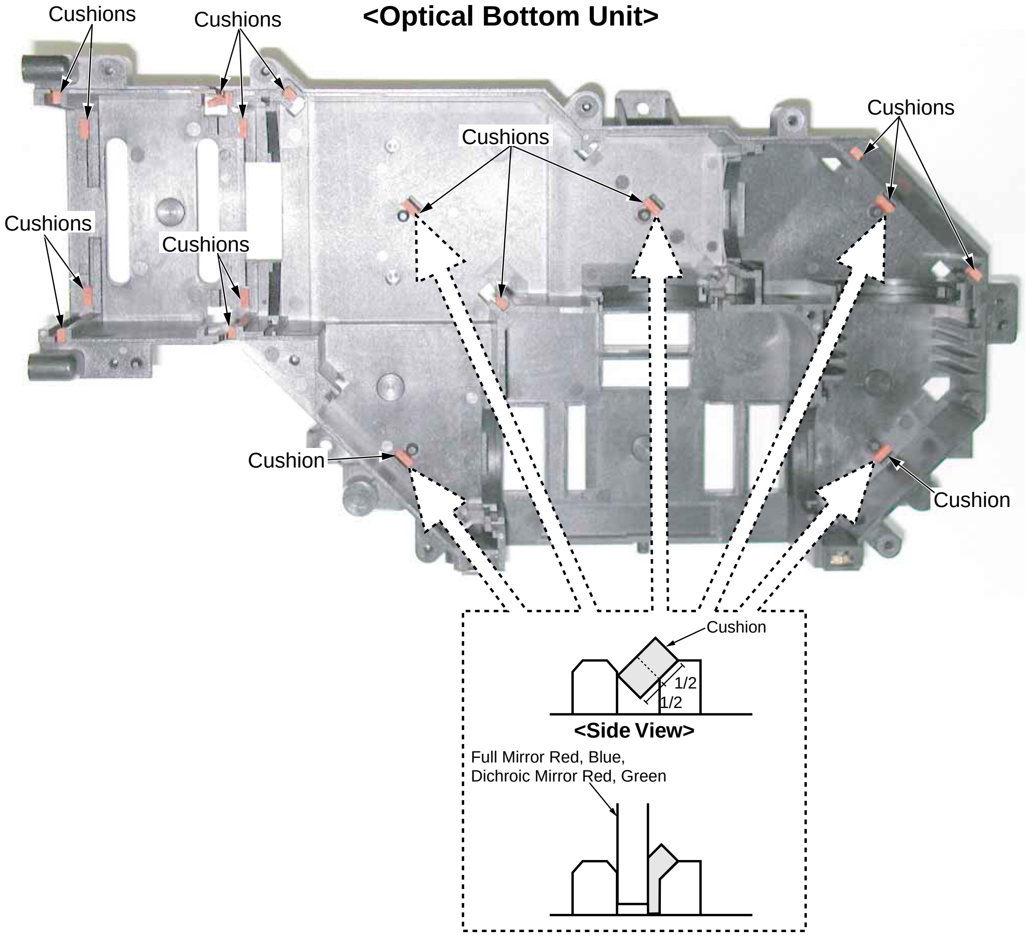

Cushions
Cushions
Cushions
Cushions
Cushions
Cushions
Cushion
Cushion
Cushion
1/2
1/2
<Side View>
Full Mirror Red, Blue,
Dichroic Mirror Red, Green

Fig. P5-5

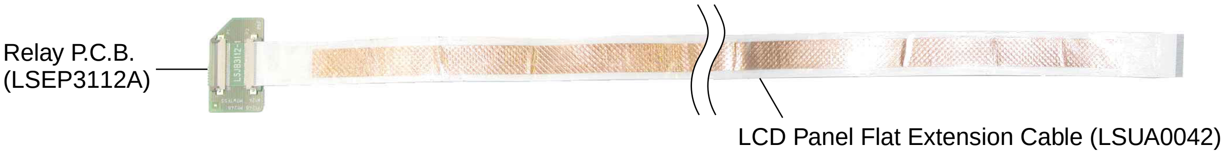
Note:

When installing the optical components, take care not to trap the cushions under the components.

7 SERVICE FIXTURES AND TOOLS

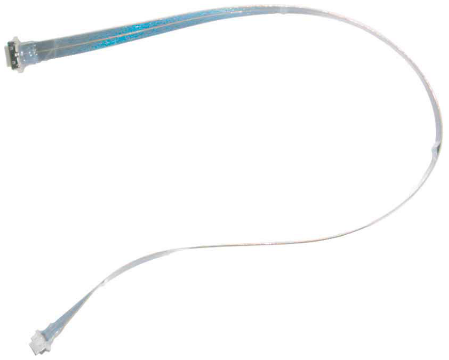
SERVICE FIXTURES AND TOOLS

LSEP3112A — **Relay P.C.B.**
LSUA0042 — **LCD Panel Flat Extension Cable**



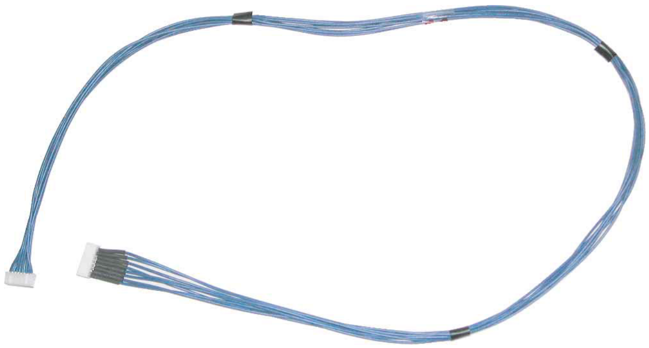
Note:
1) 3 of each are required for servicing.
2) Extension Cable-5 which was included in the 2002 model checker can be used for Relay P.C.B. (LSEP3112A) and LCD Panel Flat Extension Cable (LSUA0042).

LSUA0037 — **Signal Extension Cable**

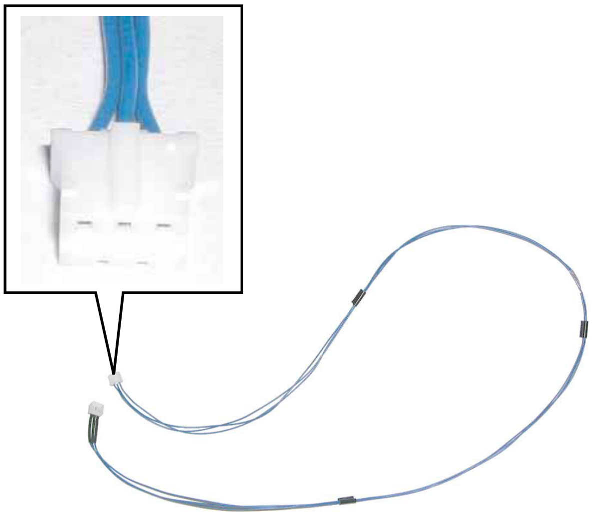


Note:
20-pin Cable (LSJA0467) which was used in 2004 model can be used for this service tool.

LSUA0038 — **Power Extension Cable**

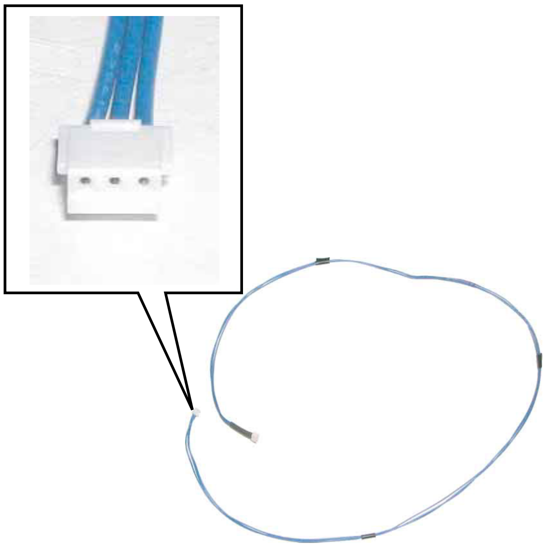


LSUA0039 — **Fan1,3 Extension Cable**

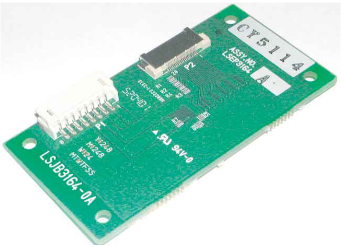


Note:
2 of each are required for servicing.

LSUA0040 — **Fan2 Extension Cable**



LSEP3164A **Converter P.C.B.**



LSUA0054 **Extension Cable 8P**

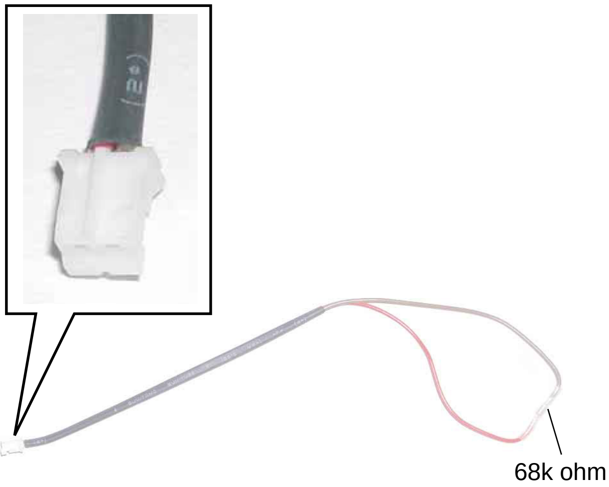
Note:
8-pin Connector Cable (LSJA0530) which was used in PT-43/50/60LC14-K model can be used for this service tool.

LSEP3102A **Monitor P.C.B.**

LSUA0041 **Cover Switch Defeat Cable**

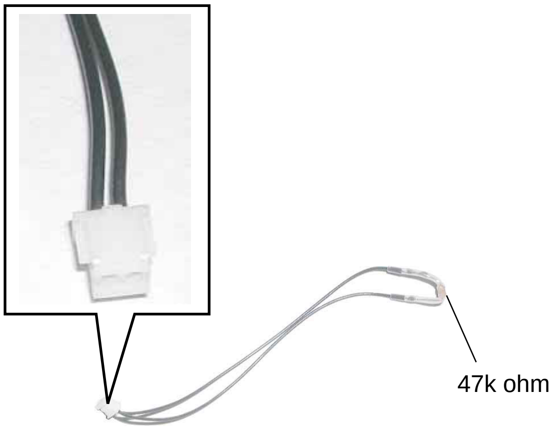
Note:
A replacement part (LSJA0476, LSJA0551), which is shorted, can be used for this service tool.

LSUA0003 **Thermistor 1 Defeat Cable**



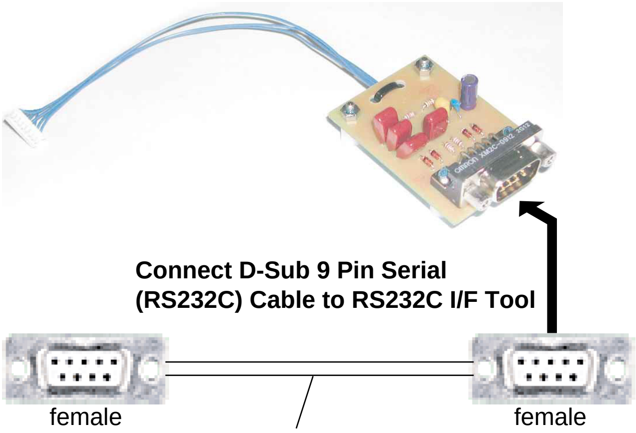
Note:
Replacement part (LSJA0477), to which a 68k ohm resistor has been attached, can be used for this service tool.

LSUA0013 **Thermistor 2 Defeat Cable**



Note:
Replacement part (LSJA0533, LSJA0478), to which a 47k ohm resistor has been attached, can be used for this service tool.

LSUA0043 **RS232C I/F Tool**



Connect D-Sub 9 Pin Serial (RS232C) Cable to RS232C I/F Tool

D-Sub 9 Pin Serial (RS232C) Cable: Purchase locally

RS232C Connecting tool
(For 2002 models (PT-40LC12/45LC12))

Note:
RS232C Connecting tool which was included in the 2002 model checker as shown above can be used for both RS232C I/F Tool (LSUA0043) and D-Sub 9 Pin Serial (RS232C) Cable.

8 ADJUSTMENT PROCEDURES 1

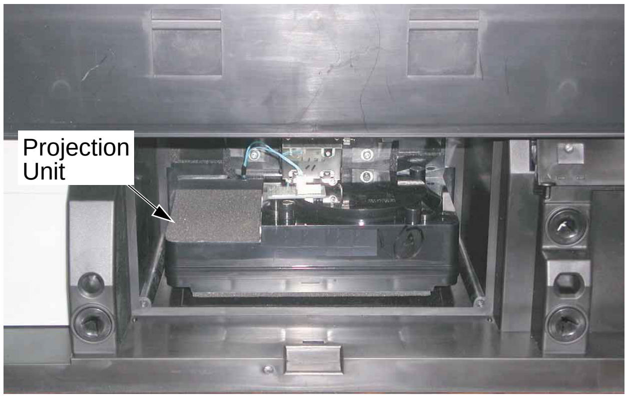
WHEN REINSTALLING THE PROJECTION UNIT OR THE BASE BODY UNIT INTO THE UNIT AT THE USER'S LOCATION:

The following ADJUSTMENT of the Projection Unit must be performed.

a. Mechanical Picture Position Adjustment
b. Focus Adjustment
   Note:
   Perform this adjustment only if necessary. (Normally, it will not be necessary.)
c. Electrical Picture Position Adjustment

Preparation of ADJUSTMENT:

1. Install all parts except the Front Cover Unit and the Optical Cover.



(With Front Cover Unit and Optical Cover removed)
<Front View>
Fig. M1-1

Note:
When the rear cover is disassembled, the screen can be moved back and forth, which could affect the video display vertical position. This could also cause the vertical adjust to be at or near its limit.
Only try the picture position adjustment with the rear cover assembled!

2. Turn the power on.
3. Press and hold the VOLUME DOWN button on the unit and the RECALL key on the remote for more than 5 seconds in power on condition. The unit will go into Work Mode. ("WORK MODE" will appear on the screen.)

```
C-COR/GAM/W-BAL
PUSH RECALL 5SEC
          WORK MODE
```

<Work Mode>
Fig. M1-2

4. 1) Then, press and hold the VOLUME DOWN button on the unit and the SWAP key on the remote for more than 1 second. The unit will go into the Factory Adjust Mode. (FACTORY ADJUST menu will appear.)

```
     FACTORY ADJUST     1/1
M:1.160
  VIDEO ADJ
  SOUND
  FAN
  OTHER
  PARTIAL
  DT BOARD

  DEFAULT SET
  (SELF CHECK)
```

<Factory Adjust mode>
Fig. M1-3

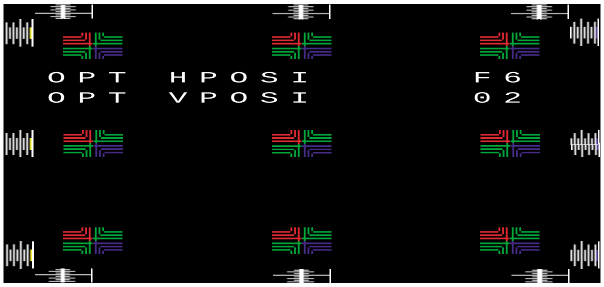
   2) Then, press the CH UP/DOWN key on the remote to select "OTHER" on menu and press the OK key. (OTHER menu will appear.)

```
          Other            1/1

OPT HPOSI          F6
OPT VPOSI          02
FILTER DET         60
ACTPOL              0
PI2CLKPOL           1
LCX                **
GC:050405B1
```

<Factory Adjust Mode>
(OTHER menu 1/1)

Fig. M1-4

5. Press the VOLUME UP/DOWN key on the remote. (Focus screen will appear.)



```
OPT HPOSI     F6
OPT VPOSI     02
```

<Focus Screen>

To release this mode:

1. After completing the ADJUSTMENT, press the CH UP/DOWN key on the remote to return to the OTHER menu.
2. Then, press RECALL key twice to return to Work Mode, and press and hold the VOLUME DOWN button on the unit and the RECALL key on the remote for more than 5 seconds. Alternatively, turn off the power.
3. Then, install the Optical Cover with the 2 Screws and the Front Cover Unit.

a. Mechanical Picture Position Adjustment (Tilt)

1) Loosen the 4 Screws on the Projection Unit.

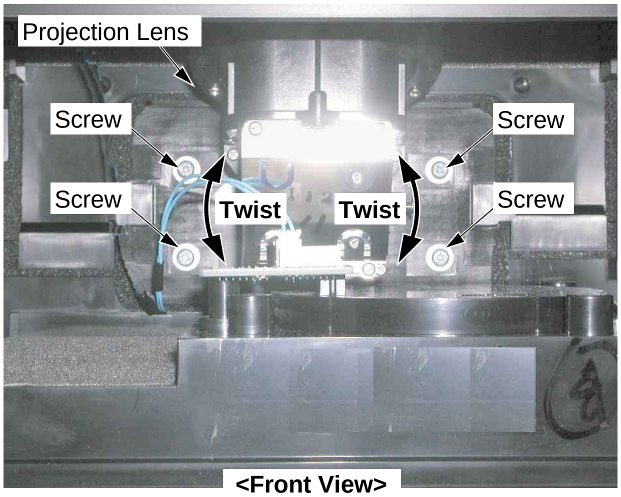
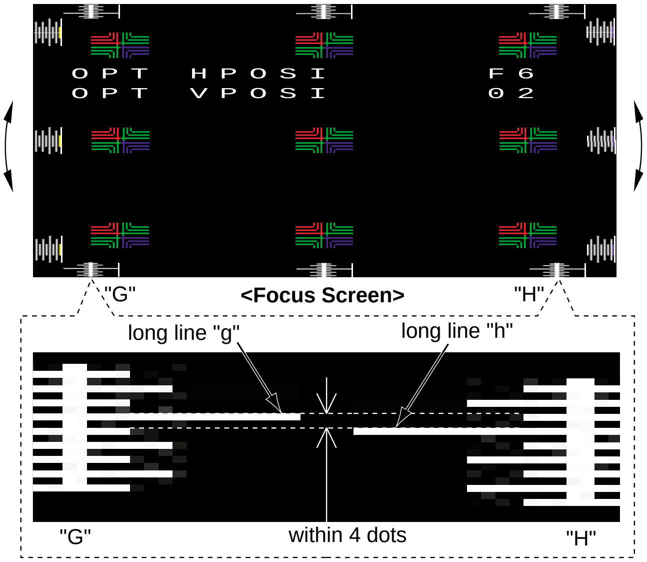

Projection Lens
Screw
Screw
Screw
Screw
Twist
Twist
<Front View>

Fig. M1-5

2) Adjust the Projection Lens by twisting so that the long line "g" and the long line "h" are within 4 dots. (The long line "g" and the long line "h" will be almost aligned horizontally.)

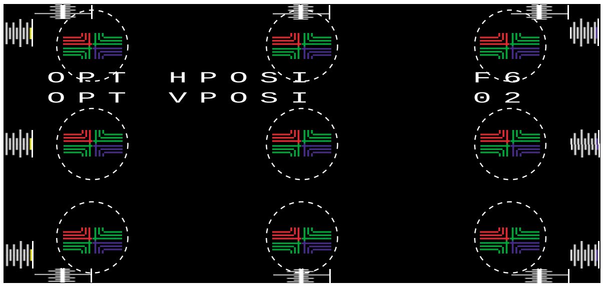

O P T H P O S I F 6
O P T V P O S I 0 2
"G"
<Focus Screen>
"H"
long line "g"
long line "h"
"G"
within 4 dots
"H"

Note:
If the Projection Lens is twisted left, the Focus Screen twists left.
If the Projection Lens is twisted right, the Focus Screen twists right.

3) Tighten the 4 Screws while fixing the Projection Lens.

b. Focus Adjustment

1) Confirm that each of the pixels in the nine portions is clearly visible.


O P T H P O S I F 6
O P T V P O S I 0 2

<Focus Screen>

2) If not, loosen the Knob on the Projection Lens using pliers until the Knob can be moved.

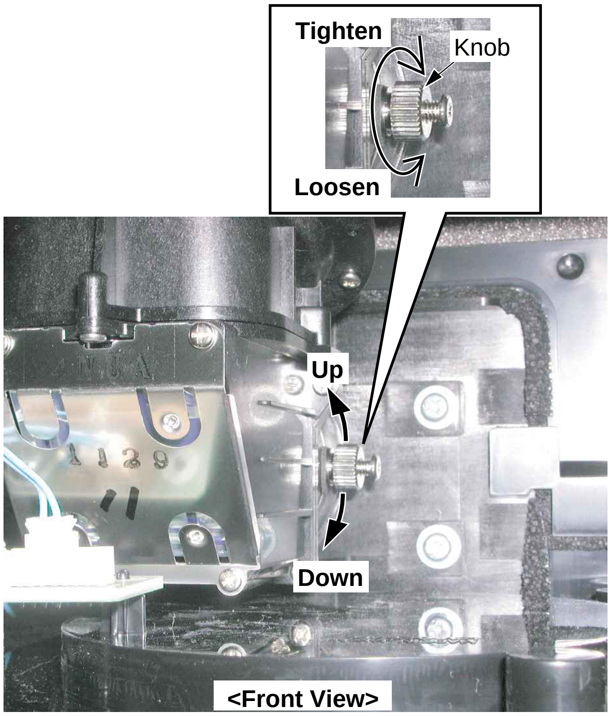

Tighten
Knob
Loosen
Up
Down
<Front View>

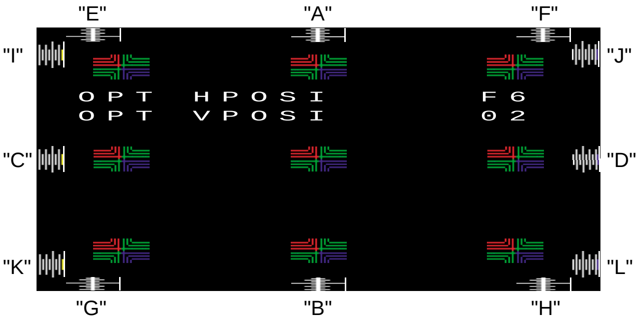
Fig. M1-6

3) Adjust the Knob by moving up or down so that each of the pixels in the nine portions is clearly visible to obtain the best focus.
4) Tighten the Knob using pliers.

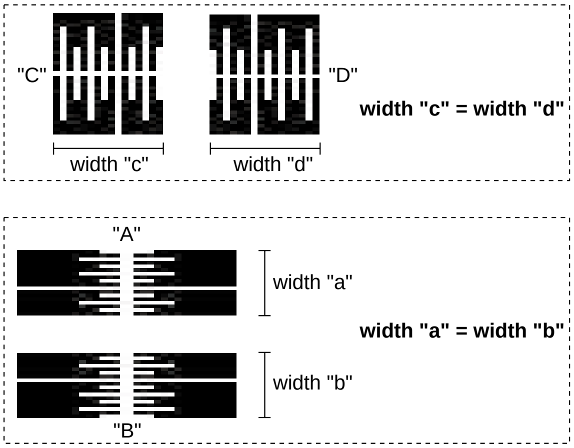
Note:
Focus Adjustment is not normally necessary. Perform this adjustment only if necessary.

c. Electrical Picture Position Adjustment

1) Adjust OPT HPOSI so that "C" is symmetrical to "D." by pressing the VOLUME UP/DOWN key on the remote to change the value.
2) Press the CH UP/DOWN key on the remote to return to the OTHER menu.
3) Select OPT VPOSI by pressing CH UP/DOWN key on the remote.
4) Adjust OPT VPOSI so that "A" is symmetrical to "B" by pressing the VOLUME UP/DOWN key on the remote to change the value.


"E"
"A"
"F"
"I"
"J"
OPT HPOSI F6
OPT VPOSI 02
"C"
"D"
"K"
"L"
"G"
"B"
"H"

<Focus Screen>


"C"
"D"
width "c" = width "d"
width "c"
width "d"
"A"
width "a"
width "a" = width "b"
width "b"
"B"

5) Confirm that all "A", "B", "C", "D", "E", "F", "G", "H", "I", "J", "K", "L" are each almost symmetrical.
6) If not, adjust the "OPT HPOSI" and "OPT VPOSI" (repeat steps 1-6) until the picture is in the correct position.
7) Press the CH UP/DOWN key on the remote to return to the OTHER menu.

9 ADJUSTMENT PROCEDURES 2

INITIAL GUIDELINE

The table below shows which adjustments are necessary according to the unit parts and individual parts to be replaced. Make sure to perform these adjustments shown below as necessary.

		Mechanical (Projection Unit) Adjustment Section		LCD Drive C.B.A. Adjustment Section						
	Adjustment Item	Full Mirror Adjustment	Polarizer Adjustment	Fan 1 Voltage Adjustment	Fan 2 Voltage Adjustment	Fan 3 Voltage Adjustment	VCOM Adjustment	Gamma Adjustment	White Balance Adjustment	Non-uniformity Color Correction (compensation by inputting data)
	Adjustment data is written to following EEPROM IC			IC2301 on LCD Drive C.B.A.	IC2301 on LCD Drive C.B.A.	IC2301 on LCD Drive C.B.A.	IC2301 on LCD Drive C.B.A.	IC2301 on LCD Drive C.B.A.	IC2301 on LCD Drive C.B.A.	IC2301 on LCD Drive C.B.A.
Replacement Parts										
Base Body Unit Projection Unit	LCD Drive C.B.A.						○	▷	○	▷
	Optical Block Unit (LSXA0646)	○	○						○	▷
	LCD/Prism Unit	▷	▷				○	▷	○	▷
	Optical Top Unit	○	○							
	Full Mirror Red/Blue/Dichroic Mirror Green	○								
	Light IN Polarizer R/G/B Unit		○							
	IC2301 (32k EEPROM)			○	○	○	○	▷	○	▷
	IC2902 (FAN1 Drive)			○						
	IC2903 (FAN2 Drive)				○					
	IC2904 (FAN3 Drive)					○				
	*Optical Top Unit is removed and installed	○	○							
	*Projection Lens Unit is removed and installed	▷	▷							

Note: ○ : Adjustment Item

Note: △ : When replacing the LCD Drive C.B.A., the LCD/Prism Unit or IC2301(32k EEPROM), confirm that the color of the entire screen. If OK, Gamma Adjustment is not needed. If NG, perform Gamma Adjustment.

: When replacing the LCD Drive C.B.A., Optical Block Unit, the LCD/Prism Unit or IC2301(32k EEPROM), confirm the color uniformity on the screen. If OK, Non-uniformity Color Correction is not needed. If NG, perform Non-uniformity Color Correction.

: When replacing the LCD/Prism Unit, confirm the color uniformity on the screen. If OK, Full Mirror/Polarizer Adjustment are not needed. If NG, perform Full Mirror/Polarizer Adjustment.

Note: Once the Optical Top Unit is removed, perform Full Mirror Adjustment and Polarizer Adjustment.

Note: When replacing the Projection Unit or the Base Body Unit, any of above adjustment are not needed.

Fig. E1-1

Perform the necessary adjustments in numerical order in each section.

Section	Step No.	Adjustment Item	Necessary Equipment	Input	
Mechanical (Projection Unit) Adjustment Section	①	Full Mirror Adjustment	·Screwdriver (+)/(-) ·NTSC Video Pattern Generator	No signal or 100% White Signal	(VIDEO 1)
	②	Polarizer Adjustment	·Screwdriver (+) ·PC(2) ·(NTSC Video Pattern Generator)	No signal or Test Pattern Signal ·Black Signal or Black Signal	(PC) or (VIDEO 1)
LCD Drive C.B.A. Adjustment Section	①	Fan 1 Voltage Adjustment	·PC(1) ·RS232C I/F Tool ·Digital Volt Meter ·Software(1)	---	---
	②	Fan 2 Voltage Adjustment	·PC(1) ·RS232C I/F Tool ·Digital Volt Meter ·Software(1)	---	---
	③	Fan 3 Voltage Adjustment	·PC(1) ·RS232C I/F Tool ·Digital Volt Meter ·Software(1)	---	---
	④	VCOM Adjustment	·PC(1) ·PC(2) with 720p video graphics card ·RS232C I/F Tool ·Software(1)	Test Pattern Signal ·70% Red Horizontal Signal ·70% Green Horizontal Signal ·70% Blue Horizontal Signal	PC
	⑤	Gamma Adjustment	·PC(1)/(2) ·RS232C I/F Tool ·Software(2)	Test Pattern Signal ·Gray Scale Pattern Signal (16 scales)	PC
	⑥	White Balance Adjustment	·PC(1)/(2) ·RS232C I/F Tool ·Software(1) ·NTSC Video Pattern Generator ·Color Temperature Meter	Gray Scale Pattern Signal (10 scales) Test Pattern Signal ·Gray Scale Pattern Signal (16 scales) ·50% White Pattern Signal	VIDEO 1 or PC
	⑦	Non-uniformity Color Correction (compensation by inputting data)	·PC(1)/(2) ·RS232C I/F Tool ·Software(3)	Test Pattern Signal ·50% White Pattern Signal	PC

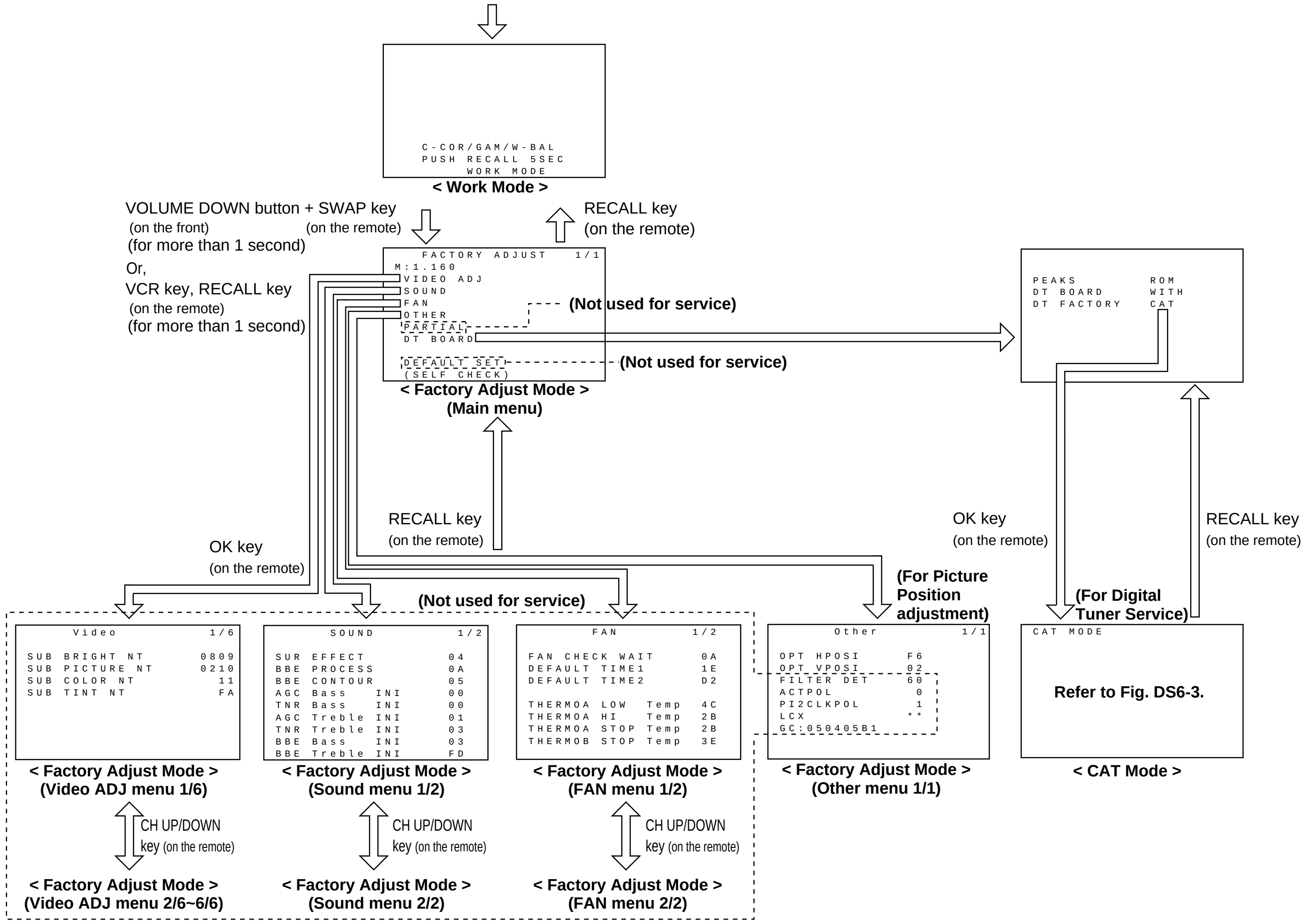
Note: The PC (1) must have a 10-key keyboard for LCD Drive Adjustment software (1).
The PC (2) is for Test Pattern Signal.

Fig. E1-2

WORK MODE AND FACTORY ADJUST MODE

Work Mode Map

Enter:
VOLUME DOWN button + RECALL key
(on the front) (on the remote)
(for more than 5 seconds in power on condition)


< Work Mode >
VOLUME DOWN button + SWAP key
(on the front)
(on the remote)
(for more than 1 second)
Or,
VCR key, RECALL key
(on the remote)
(for more than 1 second)
RECALL key
(on the remote)
(Not used for service)
(Not used for service)
< Factory Adjust Mode >
(Main menu)
RECALL key
(on the remote)
OK key
(on the remote)
OK key
(on the remote)
RECALL key
(on the remote)
(Not used for service)
(For Picture Position adjustment)
(For Digital Tuner Service)
Refer to Fig. DS6-3.
< Factory Adjust Mode >
(Video ADJ menu 1/6)
< Factory Adjust Mode >
(Sound menu 1/2)
< Factory Adjust Mode >
(FAN menu 1/2)
< Factory Adjust Mode >
(Other menu 1/1)
< CAT Mode >
CH UP/DOWN key (on the remote)
CH UP/DOWN key (on the remote)
CH UP/DOWN key (on the remote)
< Factory Adjust Mode >
(Video ADJ menu 2/6~6/6)
< Factory Adjust Mode >
(Sound menu 2/2)
< Factory Adjust Mode >
(FAN menu 2/2)

```
C-COR/GAM/W-BAL
PUSH RECALL 5SEC
     WORK MODE
```

```
   FACTORY ADJUST   1/1
M:1.160
VIDEO ADJ
SOUND
FAN
OTHER
PARTIAL
DT BOARD

DEFAULT SET
(SELF CHECK)
```

```
PEAKS          ROM
DT BOARD       WITH
DT FACTORY     CAT
```

```
     Video            1/6

SUB BRIGHT NT        0809
SUB PICTURE NT       0210
SUB COLOR NT           11
SUB TINT NT            FA
```

```
         SOUND             1/2

SUR EFFECT                  04
BBE PROCESS                 0A
BBE CONTOUR                 05
AGC Bass     INI            00
TNR Bass     INI            00
AGC Treble   INI            01
TNR Treble   INI            03
BBE Bass     INI            03
BBE Treble   INI            FD
```

```
          FAN             1/2

FAN CHECK WAIT           0A
DEFAULT TIME1            1E
DEFAULT TIME2            D2

THERMOA LOW   Temp       4C
THERMOA HI    Temp       2B
THERMOA STOP  Temp       2B
THERMOB STOP  Temp       3E
```

```
        Other            1/1

OPT HPOSI         F6
OPT VPOSI         02
FILTER DET        60
ACTPOL             0
PI2CLKPOL          1
LCX               **
GC:050405B1
```

```
CAT MODE
```

Exit:
VOLUME DOWN button + RECALL key
(on the front) (on the remote)
(for more than 5 seconds in Work Mode)
Alternatively, Power OFF

Factory Adjust Mode

This mode is required when:

- Performing Mechanical Picture Position, Focus and Electrical Picture Position adjustment (Other menu).

To enter the Factory Adjust Mode:

1) In Work Mode, press and hold the VOLUME DOWN button on the unit and the SWAP key on the remote together for more than 1 second. The unit will go into Factory Adjust Mode. ("FACTORY ADJUST" will appear on the screen.)
2) Press CH UP/DOWN key to select and press the OK key to set the item to be adjusted.
3) **After completing adjustments, press RECALL key twice to return to Work Mode. Then the adjustment data will be written to the EEPROM IC (IC6006/IC6007) on the Main C.B.A.**

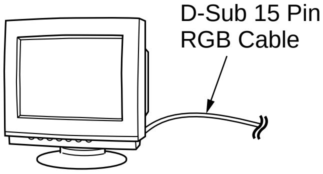
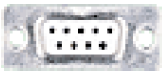
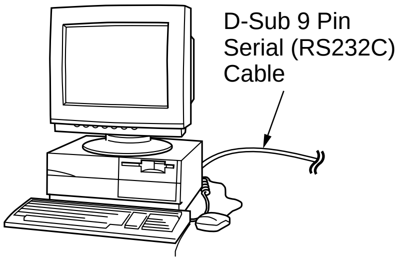
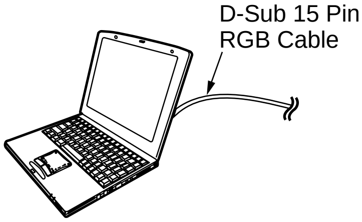
Note:

Do not unplug the AC Cord in Factory Adjust Mode or the adjustment data will not be written to the EEPROM IC.

TEST EQUIPMENT

To do all of these electrical adjustments, the following equipment is required.

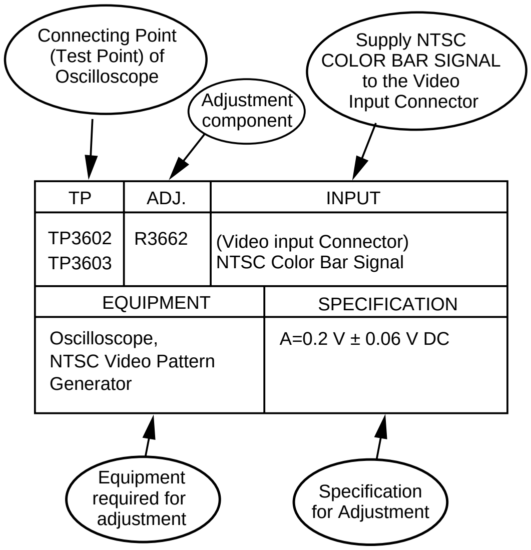
1. Dual-Trace Oscilloscope
   Voltage Range: 0.001 V to 50 V/Div.
   Frequency Range: DC to 50 MHz
   Probes: 10:1, 1:1
2. NTSC Video Pattern Generator
3. Plastic Tip Driver and Non-Metal Driver
4. (+) Screwdriver and (-) Screwdriver
5. DVM (Digital Volt Meter)
6. Color Temperature Meter
7. **PC REQUIREMENTS**
   The following PCs and Cables are required for Service Position. Prepare the following equipment locally.

PCs	Cables	Illustration	Specification
XGA Color PC Monitor for Main C.B.A. Adjustment	**D-Sub 15 Pin RGB Cable** for connecting the Monitor P.C.B. (LSEP3102A) male (For Monitor P.C.B. side)	 **Note:** PC (1) can be used for monitoring.	Monitor: 17 inch XGA (1,024 X 768) Color PC Monitor or higher
PC (1) for LCD Drive C.B.A. Adjustment	**D-Sub 9 Pin Serial (RS232C) Cable** for connecting the RS232C I/F Tool (LSUA0043)  female-female	 D-Sub 9 Pin Serial (RS232C) Cable **Note:** PC (1) must have a 10-key keyboard.	Type: Desk Top PC or with 10-key keyboard (Desk Top recommended) Monitor: 17 inch XGA (1,024 X 768) Color PC Monitor or higher OS: Windows® 95,98 Port: D-Sub 9 Pin Serial (RS232C)
PC (2) for Test Pattern Signal	**D-Sub 15 Pin RGB Cable** for connecting the PC Input Terminal male-male		Type: Notebook PC recommended OS: Windows® 95,98 or later Port: RGB output

8. Test Pattern Signal : testptnmmd2002.exe
9. Application Software for LCD Drive C.B.A. Adjustment

Application software	files		
Software (1): LCD Drive Adjustment	LCDDrv1.CAB LCDDrv4.CAB	LCDDrv2.CAB setup.exe	LCDDrv3.CAB SETUP.LST
Software (2): Sce2	SCE2.EXE Command.log GAMMA_USUAL.sce	SCE2.CNT README.TXT	Sce2.GID SCE2.HLP
Software (3): Iromura	iromura mmd2002.exe MMD2003001_2data.csv MMD2003002_2data.csv	MMD2003000_data.csv MMD2003001_3data.csv MMD2003002_3data.csv	MMD2003001_1data.csv MMD2003002_1data.csv

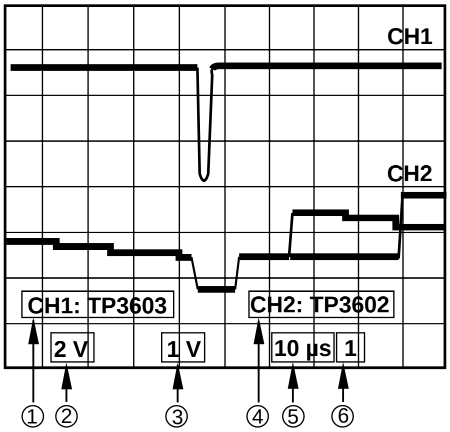
HOW TO READ THE ADJUSTMENT PROCEDURES


Connecting Point (Test Point) of Oscilloscope
Adjustment component
Supply NTSC COLOR BAR SIGNAL to the Video Input Connector
Equipment required for adjustment
Specification for Adjustment

TP	ADJ.	INPUT
TP3602 TP3603	R3662	(Video input Connector) NTSC Color Bar Signal

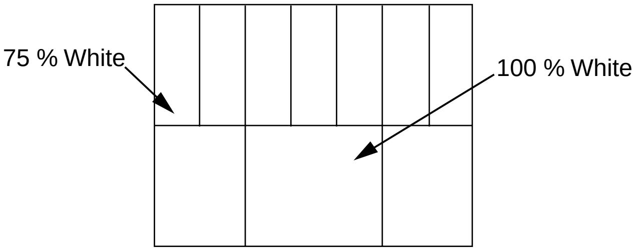
EQUIPMENT	SPECIFICATION
Oscilloscope, NTSC Video Pattern Generator	A=0.2 V ± 0.06 V DC

Fig. E2-1



① Connecting Point
③ Volts/DIV (CH2)
⑤ Time/DIV
② Volts/DIV (CH1)
④ Connecting Point
⑥ Trigger Channel of the Scope
1 : CH1 2 : CH2

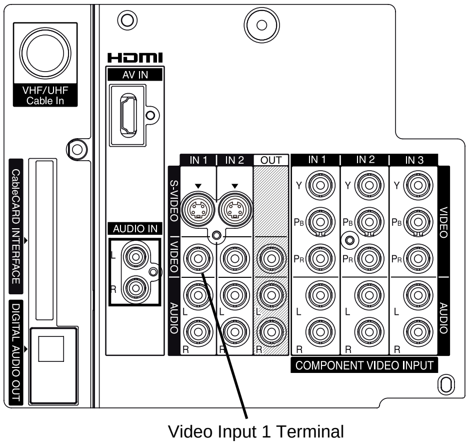
Fig. E2-2

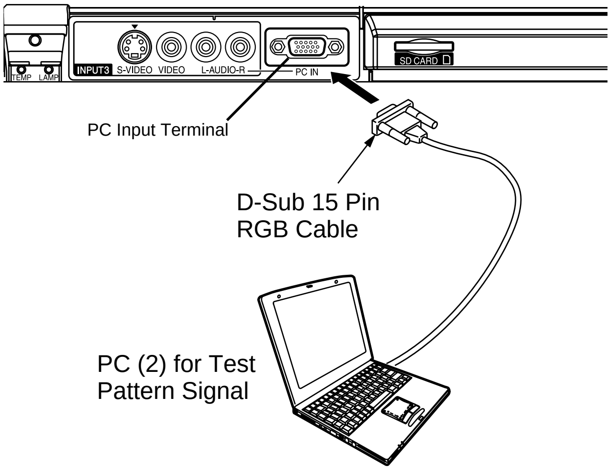

75 % White
100 % White

75 % Color Bar Signal (Standard)

Fig. E2-3

INPUT TERMINAL INFORMATION

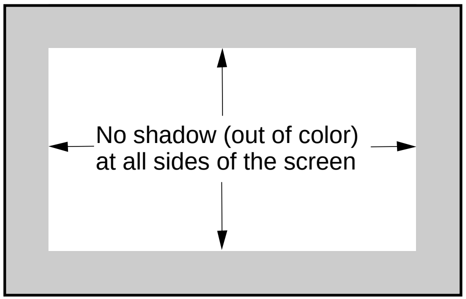

VHF/UHF Cable In
HDMI
AV IN
AUDIO IN
CableCARD INTERFACE
DIGITAL AUDIO OUT
S-VIDEO
VIDEO
AUDIO
IN 1
IN 2
OUT
IN 3
Y
PB
PR
L
R
COMPONENT VIDEO INPUT
Video Input 1 Terminal


TEMP
LAMP
INPUT3
S-VIDEO
VIDEO
L-AUDIO-R
PC IN
SD CARD
PC Input Terminal
D-Sub 15 Pin RGB Cable
PC (2) for Test Pattern Signal

FULL MIRROR ADJUSTMENT

Purpose:
To set the Full Mirror in the proper position.

Symptom of Misadjustment:
The non-uniformity color will appear.



<Screen>

TP	ADJ.	INPUT
	Dichroic Mirror Green Full Mirror Red Full Mirror Blue	No signal input (White Screen is displayed.) **(SET UP 1)** or (VIDEO Input 1 Terminal) White Signal (100%) **(SET UP 2)**

EQUIPMENT	SPECIFICATION
NTSC Video Pattern Generator, Screwdriver (+) (-)	Refer to Description below

Note:
This adjustment should be done in a darkroom.

SET UP 1:
1. Place the unit into Service Position (3).
2. Set to a desired mode except TV mode by pressing TV/VIDEO key on the remote.
3. Turn off the unit power and unplug the AC Cord.
4. Disconnect the LCD Flat Panel connectors to be no signal input. Then, plug in the AC Cord and turn on the power.
   CAUTION:
   When disconnecting/reconnecting the LCD Flat Panel connectors, be sure to unplug the AC Cord.
5. Perform Full Mirror (Green, Red, and Blue) Adjustment as follows in order.

OR

SET UP 2:
1. Place the unit into Service Position (3).
2. Connect the NTSC Video Pattern Generator to the VIDEO Input 1 Terminal.
3. Supply 100 % White Signal and set to VIDEO 1 mode by pressing TV/VIDEO key on the remote.
4. Perform Full Mirror (Green, Red, and Blue) Adjustment as follows in order.

DICHROIC MIRROR GREEN ADJUSTMENT

1. Loosen 2 Screws (A) of the Mirror Holder of the Dichroic Mirror Green as they can be moved slightly.
2. Insert a Screwdriver (-) into Portion (a) and/or (a’) and turn it to move the Mirror Holder of the Dichroic Mirror Green as indicated by the arrow. Stop moving at the point where there is no shadow around the screen.
   If there is shadow somewhere on the screen, repeat the above process.
   Then, tighten 2 Screws (A) securely (0.2-0.3 N•m).

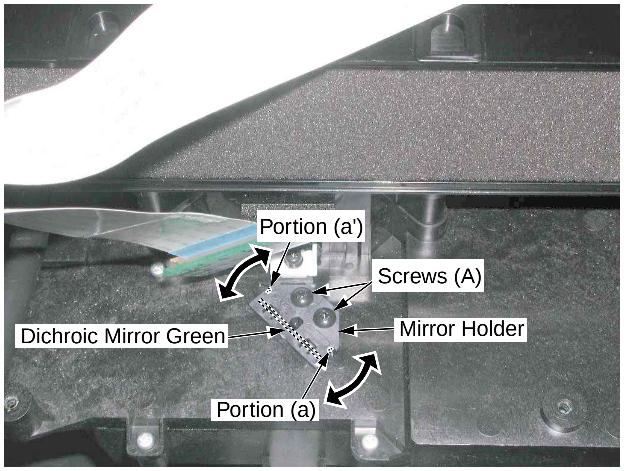
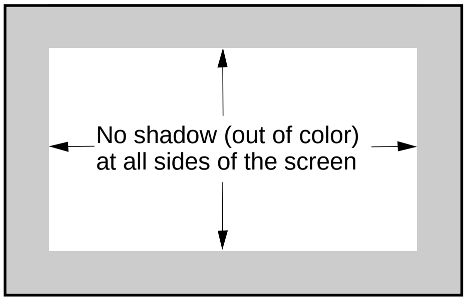


Fig. E3-1



<Screen>

Fig. E3-1-a

FULL MIRROR RED ADJUSTMENT

1. Loosen 2 Screws (B) of the Mirror Holder of the Full Mirror Red as they can be moved slightly.
2. Insert a Screwdriver (-) into Portion (b) and/or (b’) and turn it to move the Mirror Holder of the Full Mirror Red as indicated by the arrow. Stop moving at the point where there is no shadow around the screen.
   If there is shadow somewhere on the screen, repeat the above process.

   Then, tighten 2 Screws (B) securely (0.2-0.3 N•m).

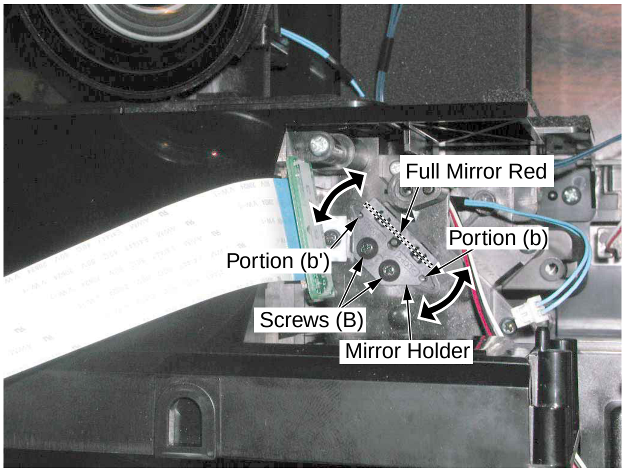
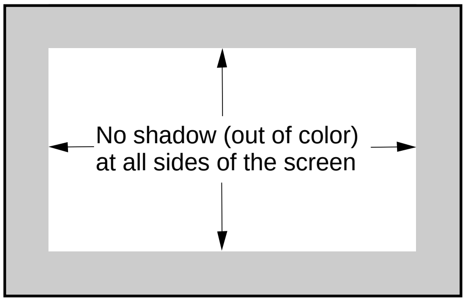

Full Mirror Red
Portion (b)
Portion (b')
Screws (B)
Mirror Holder

Fig. E3-2


No shadow (out of color)
at all sides of the screen

<Screen>

Fig. E3-2-a

FULL MIRROR BLUE ADJUSTMENT

1. Loosen 2 Screws (C) of the Mirror Holder of the Full Mirror Blue as they can be moved slightly.
2. Insert a Screwdriver (-) into Portion (c) and/or (c’) and turn it to move the Mirror Holder of the Full Mirror Blue as indicated by the arrow. Stop moving at the point where there is no shadow around the screen.
   If there is shadow somewhere on the screen, repeat the above process.

   Then, tighten 2 Screws (C) securely (0.2-0.3 N•m).

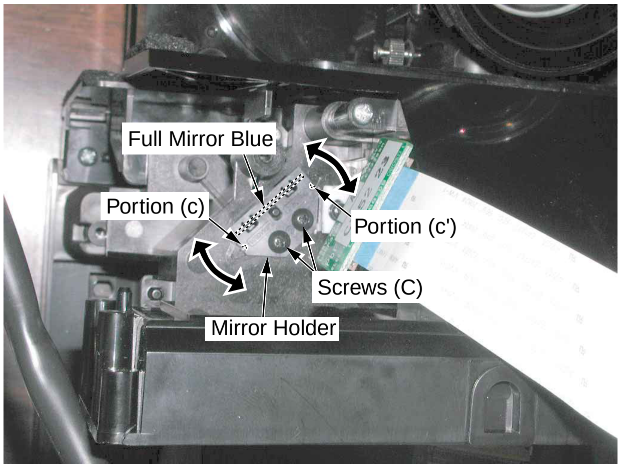
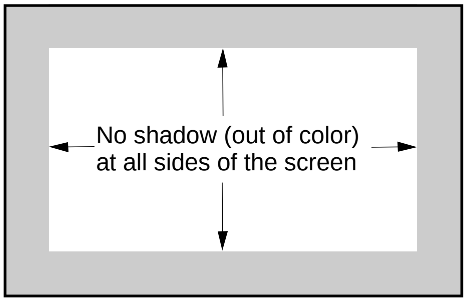

Full Mirror Blue
Portion (c)
Portion (c')
Screws (C)
Mirror Holder

Fig. E3-3


No shadow (out of color)
at all sides of the screen

<Screen>

Fig. E3-3-a

POLARIZER ADJUSTMENT

Note:

Be sure to perform this adjustment after Full Mirror Adjustment are completed.

Purpose:

To set the polarizer in the proper position.

Symptom of Misadjustment:

The picture will become bluish or reddish or greenish.

TP	ADJ.	INPUT
	Light IN Polarizer Green Light IN Polarizer Red Light IN Polarizer Blue	No signal input (Black screen is displayed.) **(SET UP 1)** or (PC Input Terminal) Black Signal **(SET UP 2)** or (VIDEO Input 1 Terminal) Black Signal **(SET UP 3)**

EQUIPMENT	SPECIFICATION
Screwdriver (+), PC(2), Test Pattern Signal, (NTSC Video Pattern Generator)	Refer to Description below

Note:

This adjustment should be done in a darkroom.

Test Pattern Signal:

- Black Signal: "8 Black" in "1 Color"

SET UP 1:

1. Place the unit into Service Position (3).
2. Set to a desired mode except TV mode by pressing TV/VIDEO key on the remote.
3. No signal input.
4. Perform Light IN Polarizer (Green, Red and Blue) Adjustment as follows in order.

OR

SET UP 2:

1. Place the unit into Service Position (3).
2. Connect the PC (2) to the PC Input Terminal with the RGB cable.
3. Supply Black Signal and set to PC mode by pressing TV/VIDEO key on the remote.
4. Perform Light IN Polarizer (Green, Red and Blue) Adjustment as follows in order.

OR

SET UP 3:

1. Place the unit into Service Position (3).
2. Connect the NTSC Video Pattern Generator to the VIDEO Input 1 Terminal.
3. Supply Black Signal and set to VIDEO 1 mode by pressing TV/VIDEO key on the remote.
4. Perform Full Mirror (Green, Red, and Blue) Adjustment as follows in order.

Note:

Confirm that the picture will become black (not become bluish or reddish or greenish) after adjustment.

LIGHT IN POLARIZER GREEN ADJUSTMENT

1. Loosen a Screw (A) of the Light IN Polarizer Green Unit.
2. Move the Light IN Polarizer Green Unit to the right and left so that there is no green tint on the whole screen, and then tighten a Screw (A) (0.20-0.23 N•m).

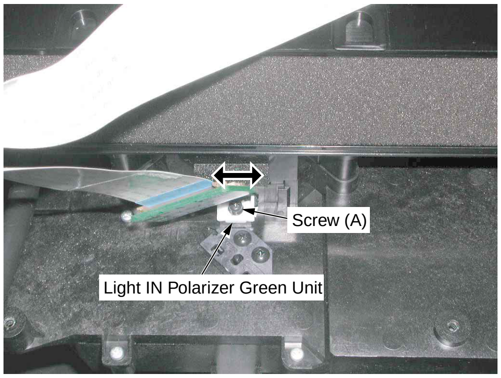


Fig. E4-1

LIGHT IN POLARIZER RED ADJUSTMENT

1. Loosen a Screw (B) of the Light IN Polarizer Red Unit.
2. Move the Light IN Polarizer Red Unit to the right and left so that there is no red tint on the whole screen, and then tighten a Screw (B) (0.20-0.23 N•m).

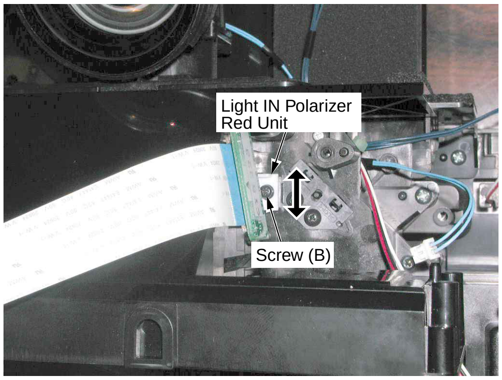


Fig. E4-2

LIGHT IN POLARIZER BLUE ADJUSTMENT

1. Loosen a Screw (C) of the Light IN Polarizer Blue Unit.
2. Move the Light IN Polarizer Blue Unit to the right and left so that there is no blue tint on the whole screen, and tighten a Screw (C) (0.20-0.23 N•m).

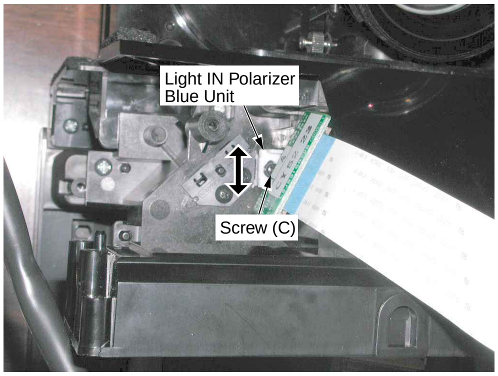
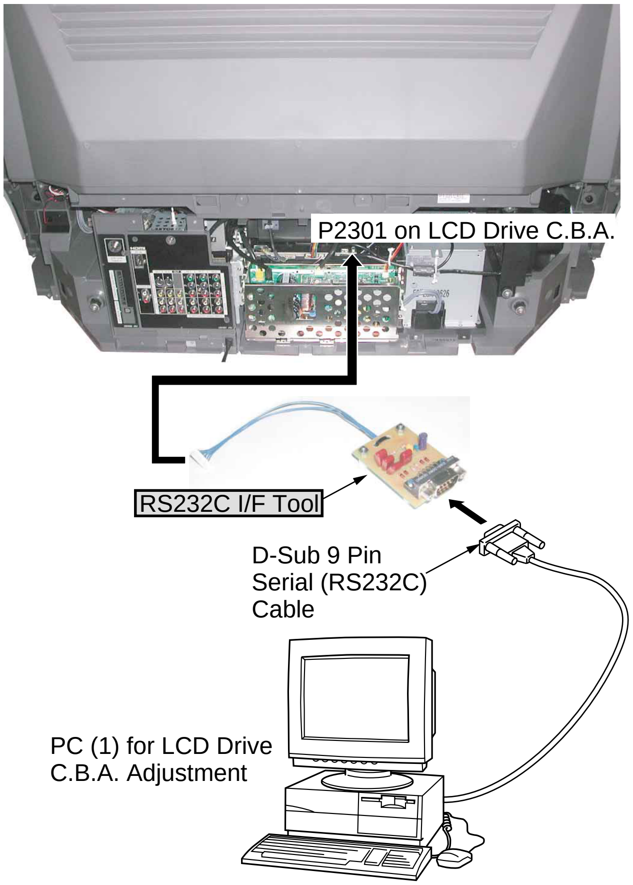


Fig. E4-3

1. FAN1, FAN2, FAN3, VCOM, WHITE BALANCE ADJUSTMENT

SET UP for LCD Drive Adjustment software (Software (1)):

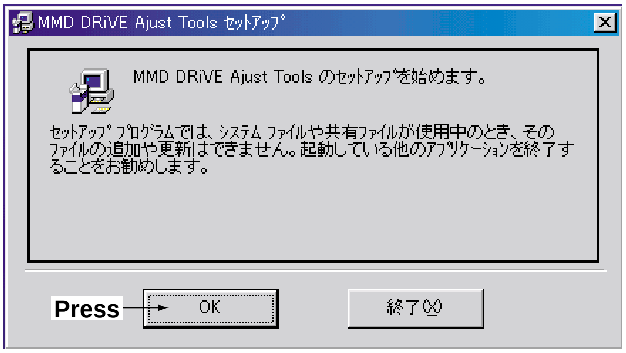
1. 1) Remove the Rear Cover.
   2) Connect the PC (1) and P2301 on the LCD Drive C.B.A. with the RS232C I/F Tool and the D-Sub 9 Pin Serial (RS232C) Cable.


P2301 on LCD Drive C.B.A.
RS232C I/F Tool
D-Sub 9 Pin Serial (RS232C) Cable
PC (1) for LCD Drive C.B.A. Adjustment

2. Install the software (1) into the PC (1).
   Note:
   The PC (1) must have a 10-key keyboard.
   1) Copy the "LCD Drive Adjustment software (6 items)" folder to any drive.

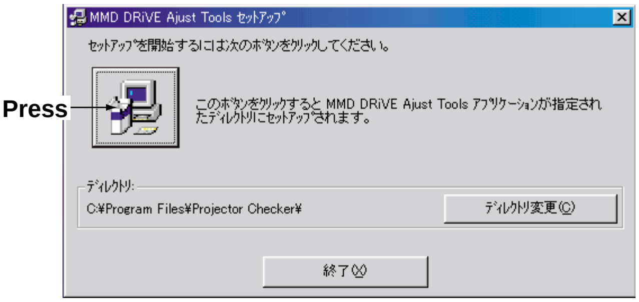
Application software	files
Software (1): LCD Drive Adjustment	LCDDrv1.CAB LCDDrv2.CAB LCDDrv3.CAB LCDDrv4.CAB setup.exe SETUP.LST

   2) Execute the "setup.exe" to install.
   3) Press the buttons in the following dialog boxes as shown.


MMD DRiVE Ajust Tools ｾｯﾄｱｯﾌﾟ
Press
OK
終了(X)

MMD DRiVE Ajust Tools のｾｯﾄｱｯﾌﾟを始めます。

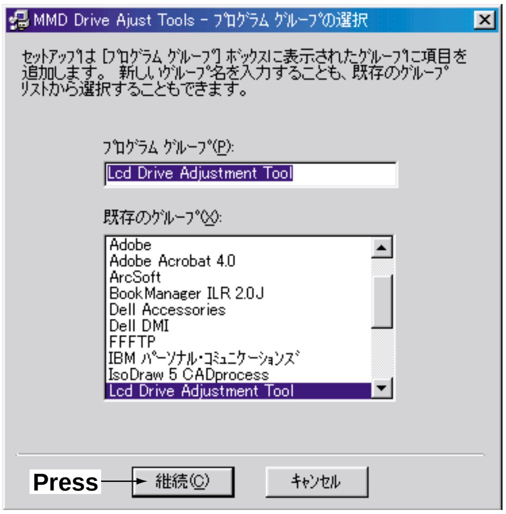
ｾｯﾄｱｯﾌﾟ ﾌﾟﾛｸﾞﾗﾑでは、ｼｽﾃﾑ ﾌｧｲﾙや共有ﾌｧｲﾙが使用中のとき、そのﾌｧｲﾙの追加や更新はできません。起動している他のｱﾌﾟﾘｹｰｼｮﾝを終了することをお勧めします。


MMD DRiVE Ajust Tools ｾｯﾄｱｯﾌﾟ
Press
ﾃﾞｨﾚｸﾄﾘ変更(C)
終了(X)

ｾｯﾄｱｯﾌﾟを開始するには次のﾎﾞﾀﾝをｸﾘｯｸしてください。

このﾎﾞﾀﾝをｸﾘｯｸすると MMD DRiVE Ajust Tools ｱﾌﾟﾘｹｰｼｮﾝが指定されたﾃﾞｨﾚｸﾄﾘにｾｯﾄｱｯﾌﾟされます。

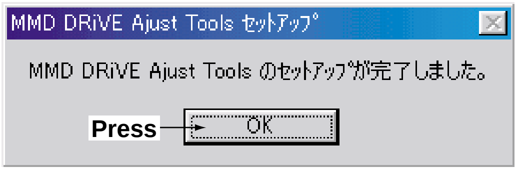
ﾃﾞｨﾚｸﾄﾘ: C:¥Program Files¥Projector Checker¥


MMD Drive Ajust Tools - ﾌﾟﾛｸﾞﾗﾑ ｸﾞﾙｰﾌﾟの選択
Press
継続(C)
ｷｬﾝｾﾙ

ｾｯﾄｱｯﾌﾟは [ﾌﾟﾛｸﾞﾗﾑ ｸﾞﾙｰﾌﾟ] ﾎﾞｯｸｽに表示されたｸﾞﾙｰﾌﾟに項目を追加します。 新しいｸﾞﾙｰﾌﾟ名を入力することも、既存のｸﾞﾙｰﾌﾟ ﾘｽﾄから選択することもできます。

ﾌﾟﾛｸﾞﾗﾑ ｸﾞﾙｰﾌﾟ(P): Lcd Drive Adjustment Tool

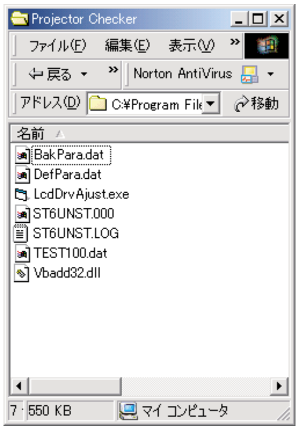
既存のｸﾞﾙｰﾌﾟ(X):
- Adobe
- Adobe Acrobat 4.0
- ArcSoft
- BookManager ILR 2.0J
- Dell Accessories
- Dell DMI
- FFFTP
- IBM ﾊﾟｰｿﾅﾙ･ｺﾐｭﾆｹｰｼｮﾝｽﾞ
- IsoDraw 5 CADprocess
- Lcd Drive Adjustment Tool


MMD DRiVE Ajust Tools ｾｯﾄｱｯﾌﾟ
OK

MMD DRiVE Ajust Tools のｾｯﾄｱｯﾌﾟが完了しました。

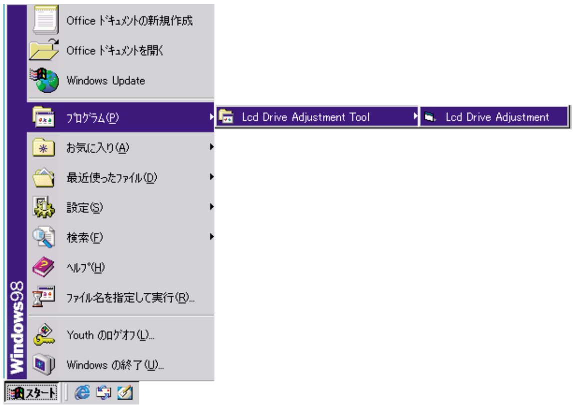
Press

4) The following files will be created on "C:\Program Files\Projector Checker." Software (1) installation is complete.

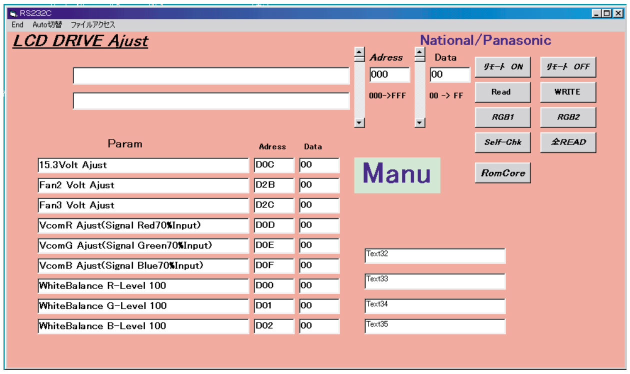

Projector Checker
ﾌｧｲﾙ(F) 編集(E) 表示(V)
戻る
Norton AntiVirus
ｱﾄﾞﾚｽ(D) C:¥Program File
移動
名前
7
550 KB
ﾏｲ ｺﾝﾋﾟｭｰﾀ

- BakPara.dat
- DefPara.dat
- LcdDrvAjust.exe
- ST6UNST.000
- ST6UNST.LOG
- TEST100.dat
- Vbadd32.dll

3. Turn on the unit power.
4. To start up the software (1), select the "LCD Drive Adjustment" on Program in Start menu.
   The start-up menu will appear.

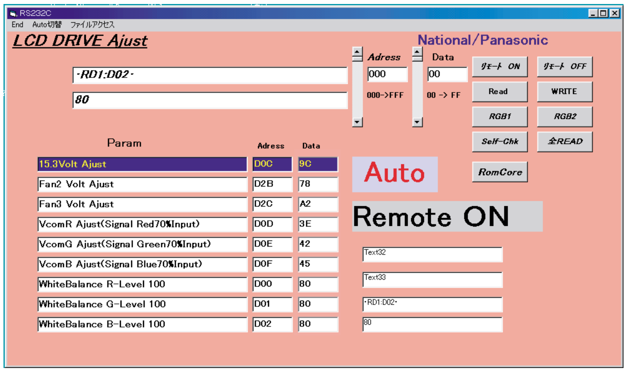

Office ﾄﾞｷｭﾒﾝﾄの新規作成
Office ﾄﾞｷｭﾒﾝﾄを開く
Windows Update
ﾌﾟﾛｸﾞﾗﾑ(P)
Lcd Drive Adjustment Tool
Lcd Drive Adjustment
お気に入り(A)
最近使ったﾌｧｲﾙ(D)
設定(S)
検索(F)
ﾍﾙﾌﾟ(H)
ﾌｧｲﾙ名を指定して実行(R)...
Youth のﾛｸﾞｵﾌ(L)...
Windows の終了(U)...
Windows98
ｽﾀｰﾄ

5. To turn the remote on, press DEL key.


RS232C
End Auto切替 ﾌｧｲﾙｱｸｾｽ
LCD DRIVE Ajust
National/Panasonic
Adress
Data
000
00
000->FFF
00 -> FF
ｹﾞｰﾄ ON
ｹﾞｰﾄ OFF
Read
WRITE
RGB1
RGB2
Self-Chk
全READ
RomCore
Manu
Text32
Text33
Text34
Text35

Param	Adress	Data
15.3Volt Ajust	D0C	00
Fan2 Volt Ajust	D2B	00
Fan3 Volt Ajust	D2C	00
VcomR Ajust(Signal Red70%Input)	D0D	00
VcomG Ajust(Signal Green70%Input)	D0E	00
VcomB Ajust(Signal Blue70%Input)	D0F	00
WhiteBalance R-Level 100	D00	00
WhiteBalance G-Level 100	D01	00
WhiteBalance B-Level 100	D02	00

6. "Manu" indication will change to "Auto" indication, and "Remote ON" indication will appear.
   Confirm NUMLOCK is on. If not, turn on NUMLOCK by pressing the NUMLOCK key on the 10-key keyboard.

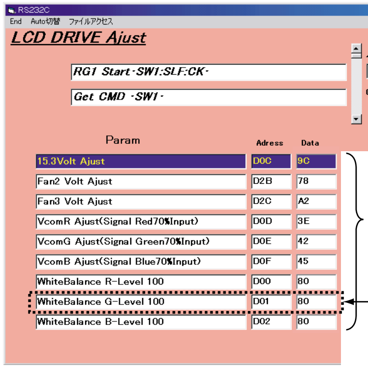

RS232C
End Auto切替 ﾌｧｲﾙｱｸｾｽ
LCD DRIVE Ajust
National/Panasonic
Adress
Data
000
00
000->FFF
00 -> FF
ｹﾞｰﾄ ON
ｹﾞｰﾄ OFF
Read
WRITE
RGB1
RGB2
Self-Chk
全READ
RomCore
Auto
Remote ON
Text32
Text33

·RD1:D02·

80

Param	Adress	Data
15.3Volt Ajust	D0C	9C
Fan2 Volt Ajust	D2B	78
Fan3 Volt Ajust	D2C	A2
VcomR Ajust(Signal Red70%Input)	D0D	3E
VcomG Ajust(Signal Green70%Input)	D0E	42
VcomB Ajust(Signal Blue70%Input)	D0F	45
WhiteBalance R-Level 100	D00	80
WhiteBalance G-Level 100	D01	80
WhiteBalance B-Level 100	D02	80

7. Perform the necessary adjustment for the LCD Drive C.B.A.


RS232C
End Auto切替 ﾌｧｲﾙｱｸｾｽ
LCD DRIVE Ajust
National/Panasonic
Adress
Data
000
00
000->FFF
00 -> FF
ｹﾞｰﾄ ON
ｹﾞｰﾄ OFF
Read
WRITE
RGB1
RGB2
Self-Chk
全READ

RG1 Start·SW1:SLF:CK·

Get CMD ·SW1·

Param	Adress	Data
15.3Volt Ajust	D0C	9C
Fan2 Volt Ajust	D2B	78
Fan3 Volt Ajust	D2C	A2
VcomR Ajust(Signal Red70%Input)	D0D	3E
VcomG Ajust(Signal Green70%Input)	D0E	42
VcomB Ajust(Signal Blue70%Input)	D0F	45
WhiteBalance R-Level 100	D00	80
WhiteBalance G-Level 100	D01	80
WhiteBalance B-Level 100	D02	80

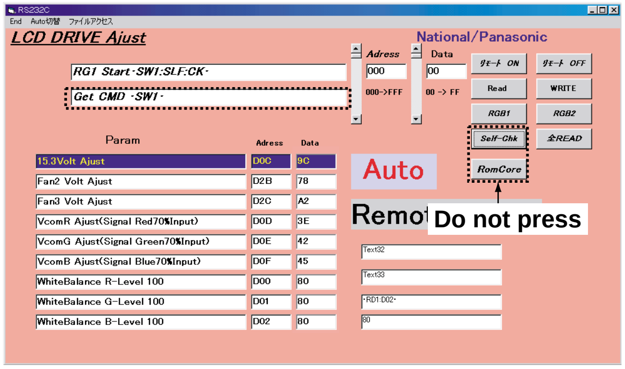
Select it for each adjustment

(Not used for service)

8. After completing adjustments, turn the remote off by pressing DEL key. Then, end the software (1).

CAUTION OF IC2301 REPLACEMENT:

EEPROM IC (IC2301) is supplied with the data written.
After replacing IC2301, Do not press "Self-Chk" and "Rom Core."


RS232C
End Auto切替 ﾌｧｲﾙｱｸｾｽ
LCD DRIVE Ajust
National/Panasonic
Adress
Data
000
00
000->FFF
00 -> FF
ｹﾞｰﾄ ON
ｹﾞｰﾄ OFF
Read
WRITE
RGB1
RGB2
Self-Chk
全READ
RomCore
Auto
Remot
Text32
Text33

RG1 Start·SW1:SLF:CK·

Get CMD ·SW1·

Param	Adress	Data
15.3Volt Ajust	D0C	9C
Fan2 Volt Ajust	D2B	78
Fan3 Volt Ajust	D2C	A2
VcomR Ajust(Signal Red70%Input)	D0D	3E
VcomG Ajust(Signal Green70%Input)	D0E	42
VcomB Ajust(Signal Blue70%Input)	D0F	45
WhiteBalance R-Level 100	D00	80
WhiteBalance G-Level 100	D01	80
WhiteBalance B-Level 100	D02	80

·RD1:D02·

80

Do not press

FAN 1 VOLTAGE ADJUSTMENT

Purpose:

To set the optimum rotation speed of the Fan 1.

Symptom of Misadjustment:

Temperature of the unit becomes too high or sound of the Fan 1 becomes loud.

<table>
<tr><th>TP</th><th>ADJ.</th><th colspan="2">INPUT</th></tr>
<tr><td>P2902 (Pin 1)
or TP2907</td><td>15.3Volt
Adjust</td><td colspan="2"></td></tr>
<tr><td colspan="3">EQUIPMENT</td><td>SPECIFICATION</td></tr>
<tr><td colspan="3">PC(1), DVM (Digital Volt Meter)</td><td>+7.0 VDC±0.05 VDC</td></tr>
</table>

1. Connect the DVM (Digital Volt Meter) to P2902 (Pin 1) on the LCD Drive C.B.A. after disconnecting the Connector Cable from Connector P2902.
2. Select "15.3Volt Adjust" on menu by 2(↓), 8(↑) key on the 10-key keyboard.
3. Adjust "15.3Volt Adjust" by pressing 4(←), 6(→) key on the 10-key keyboard so that the voltage becomes +7.0 VDC±0.05 VDC.

FAN 2 VOLTAGE ADJUSTMENT

Purpose:

To set the optimum rotation speed of the Fan 2.

Symptom of Misadjustment:

Temperature of the unit becomes too high or sound of the Fan 2 becomes loud.

<table>
<tr><th>TP</th><th>ADJ.</th><th colspan="2">INPUT</th></tr>
<tr><td>P2903 (Pin 1)
or TP2908</td><td>Fan2 Volt
Adjust</td><td colspan="2"></td></tr>
<tr><td colspan="3">EQUIPMENT</td><td>SPECIFICATION</td></tr>
<tr><td colspan="3">PC(1), DVM (Digital Volt Meter)</td><td>+8.0 VDC±0.05 VDC</td></tr>
</table>

1. Connect the DVM (Digital Volt Meter) to P2903 (Pin 1) on the LCD Drive C.B.A. after disconnecting the Connector Cable from Connector P2903.
2. Select "Fan2 Volt Adjust" on menu by 2(↓), 8(↑) key on the 10-key keyboard.
3. Adjust "Fan2 Volt Adjust" by pressing 4(←), 6(→) key on the 10-key keyboard so that the voltage becomes +8.0 VDC±0.05 VDC.

FAN 3 VOLTAGE ADJUSTMENT

Purpose:

To set the optimum rotation speed of the Fan 3.

Symptom of Misadjustment:

Temperature of the unit becomes too high or sound of the Fan 3 becomes loud.

<table>
<tr><th>TP</th><th>ADJ.</th><th colspan="2">INPUT</th></tr>
<tr><td>P2904 (Pin 1)
or TP2909</td><td>Fan3 Volt
Adjust</td><td colspan="2"></td></tr>
<tr><td colspan="3">EQUIPMENT</td><td>SPECIFICATION</td></tr>
<tr><td colspan="3">PC(1), DVM (Digital Volt Meter)</td><td>+7.0 VDC±0.05 VDC</td></tr>
</table>

1. Connect the DVM (Digital Volt Meter) to P2904 (Pin 1) on the LCD Drive C.B.A. after disconnecting the Connector Cable from Connector P2904.
2. Select "Fan3 Volt Adjust" on menu by 2(↓), 8(↑) key on the 10-key keyboard.
3. Adjust "Fan3 Volt Adjust" by pressing 4(←), 6(→) key on the 10-key keyboard so that the voltage becomes +7.0 VDC±0.05 VDC.

VCOM ADJUSTMENT

Purpose:

To set the optimum LCD common voltage.

Symptom of Misadjustment:

The picture will be flickering.

TP	ADJ.	INPUT
	Vcom R Adjust	(PC Input Terminal) 70 % Red Horizontal Signal
	Vcom G Adjust	(PC Input Terminal) 70 % Green Horizontal Signal
	Vcom B Adjust	(PC Input Terminal) 70 % Blue Horizontal Signal

EQUIPMENT	SPECIFICATION
PC(1)/(2), Test Pattern Signal or PC(1) with 720p video graphics card	Refer to Description below

CAUTION:

This method is for use with PC which has a 720p video graphics card to output the Test Pattern Signal.

Test Pattern Signal:

- 70 % Red Horizontal Signal: "2 Red 70 %" in "2 Horizontal" of "3 Phase"
- 70 % Green Horizontal Signal: "3 Green 70 %" in "2 Horizontal" of "3 Phase"
- 70 % Blue Horizontal Signal: "4 Blue 70 %" in "2 Horizontal" of "3 Phase"

1. Connect the PC(2) to the PC Input Terminal with the RGB Cable.
2. Set to PC mode by pressing TV/VIDEO key on the remote.
3. Supply 70% Red Horizontal signal. (PC (2) output should be **720p resolution** (**1280 x 720**).)
   Note:
   A Desk Top PC with a video graphics card compatible with 720p resolution must be used.

1. Select "Vcom R Adjust" in software (1) menu by 2(↓), 8(↑) key on the 10-key keyboard.
2. Adjust "Vcom R Adjust" by pressing 4(←), 6(→) key on the 10-key keyboard so that there are no flicker on the whole screen.
3. Supply 70% Green Horizontal signal.
4. Then, select "Vcom G Adjust" in software (1) menu.
5. Adjust "Vcom G Adjust" by pressing 4(←), 6(→) key on the 10-key keyboard so that the flicker on the whole screen becomes minimum and uniformity.
6. Supply 70% Blue Horizontal signal.
7. Then, select "Vcom B Adjust" in software (1) menu.
8. Adjust "Vcom B Adjust" by pressing 4(←), 6(→) key on the 10-key keyboard so that the flicker on the whole screen becomes minimum and uniformity.
9. Then, end the software (1).

WHITE BALANCE ADJUSTMENT

Note:

1. Be sure to perform the White Balance Adjustment after turning on the power for more than 10 minutes so that color temperature is stable.
2. This adjustment should be done in a darkroom.

Purpose:

To set the standard white level for each color temperature.

Symptom of Misadjustment:

The white color of picture will become bluish or reddish.

TP	ADJ.	INPUT
	White Balance R-Level 100 White Balance B-Level 100	(PC Input Terminal) Gray Scale Pattern Signal (16 scales) or (VIDEO Input 1 Terminal) Gray Scale Pattern Signal (10 scales)

EQUIPMENT	SPECIFICATION
PC(1)/(2), Test Pattern Signal, NTSC Video Pattern Generator	Refer to Description below

Test Pattern Signal:

- Gray Scale Pattern Signal (16 scales): "1 White 16 grade (Horiz)" in "Bar Reverse"

Rough Adjustment:

(Rough adjustment by PC signal : Judged by eye)

1. Connect the PC(2) to the PC Input Terminal with the RGB Cable.
2. Set to PC mode by pressing TV/VIDEO key on the remote.
3. Supply Gray Scale Pattern Signal (16 scales) from PC(2).
4. Select "White Balance R-Level 100" or "White Balance B-Level 100" on menu by 2(↓), 8(↑) key on the 10-key keyboard.
5. Adjust "White Balance R-Level 100" and "White Balance B-Level 100" by pressing 4(←), 6(→) key on the 10-key keyboard so that the area around 14th and 16th scale (A) becomes pure gray with no red or blue tint.

Gray Scale Pattern Signal (16 scales)

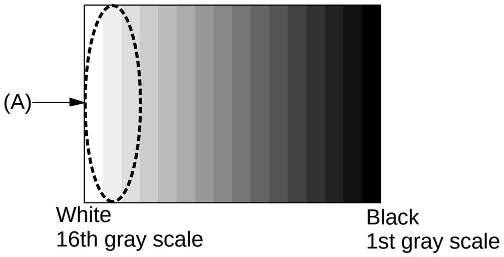


Fig. E8-1

Note:

Adjust it with viewing in scale(A) though, the white color of whole screen changes.

(Rough adjustment by video signal : Judged by eye)

1. Connect the NTSC Video Pattern Generator to the VIDEO Input 1 Terminal.
2. Set to VIDEO 1 mode by pressing TV/VIDEO key on the remote.
3. Supply Gray Scale Pattern Signal (10 scales).
4. Select "White Balance R-Level 100" or "White Balance B-Level 100" on menu by 2(↓), 8(↑) key on the 10-key keyboard.
5. Adjust "White Balance R-Level 100" and "White Balance B-Level 100" by pressing 4(←), 6(→) key on the 10- keyboard so that the area around 9th and 10th scale (B) becomes pure gray with no red or blue tint.

Gray Scale Pattern Signal (10 scales)

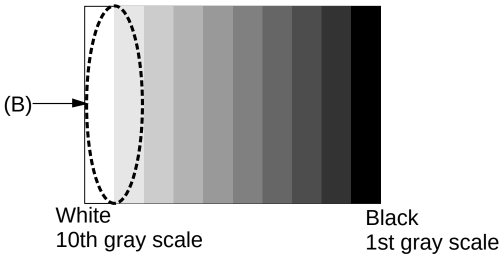


Fig. E8-2

Note:

Adjust it with viewing in scale(B) though, the white color of whole screen changes.

Fine Adjustment:

TP	ADJ.	INPUT
	White Balance R-Level 100 White Balance B-Level 100	(PC Input Terminal) 50 % White Pattern Signal 100 % White Pattern Signal

EQUIPMENT	SPECIFICATION
PC(1)/(2), Test Pattern Signal, Color Temperature Meter	Refer to Description below

Test Pattern Signal:
- 50 % White Pattern Signal: "9 Gray" in "1 Color"
- 100 % White Pattern Signal: "1 White" in "1 Color"

1. Set to PC mode by pressing TV/VIDEO key on the remote.
2. Supply 50 % White Pattern Signal from PC(2).
3. Select "White Balance R-Level 100" or "White Balance B-Level 100" on menu by 2(↓), 8(↑) key on the 10-key keyboard.
4. Adjust "White Balance R-Level 100" and "White Balance B-Level 100" by pressing 4(←), 6(→) key on the 10-key keyboard so that the color temperature (K) and its deviation (uv) in the center of the screen are 9300 K to 10900 K, and -0.020 uv to -0.004 uv (x=0.283 - 0.291, y=0.259 - 0.289) respectively by Color Temperature Meter.
5. Supply 100 % White Pattern Signal from PC(2).
6. Confirm that the color temperature (K) and its deviation (uv) in the center of the screen are 8000 K to 13000 K, and -0.016 uv to +0.002 uv (x=0.273 - 0.299, y=0.263 - 0.295) respectively by Color Temperature Meter.
7. If OK, end the software (1).
   If NG, repeat steps 2 through 6 until color temperature (K) and its deviation (uv) become within the specification.

2. GAMMA ADJUSTMENT (Compensation by transmitting gamma data)

Note:
When replacing the LCD Drive C.B.A., the LCD/Prism Unit or IC2301 (32k EEPROM), confirm that the color of the entire screen.
If NG, perform this adjustment.

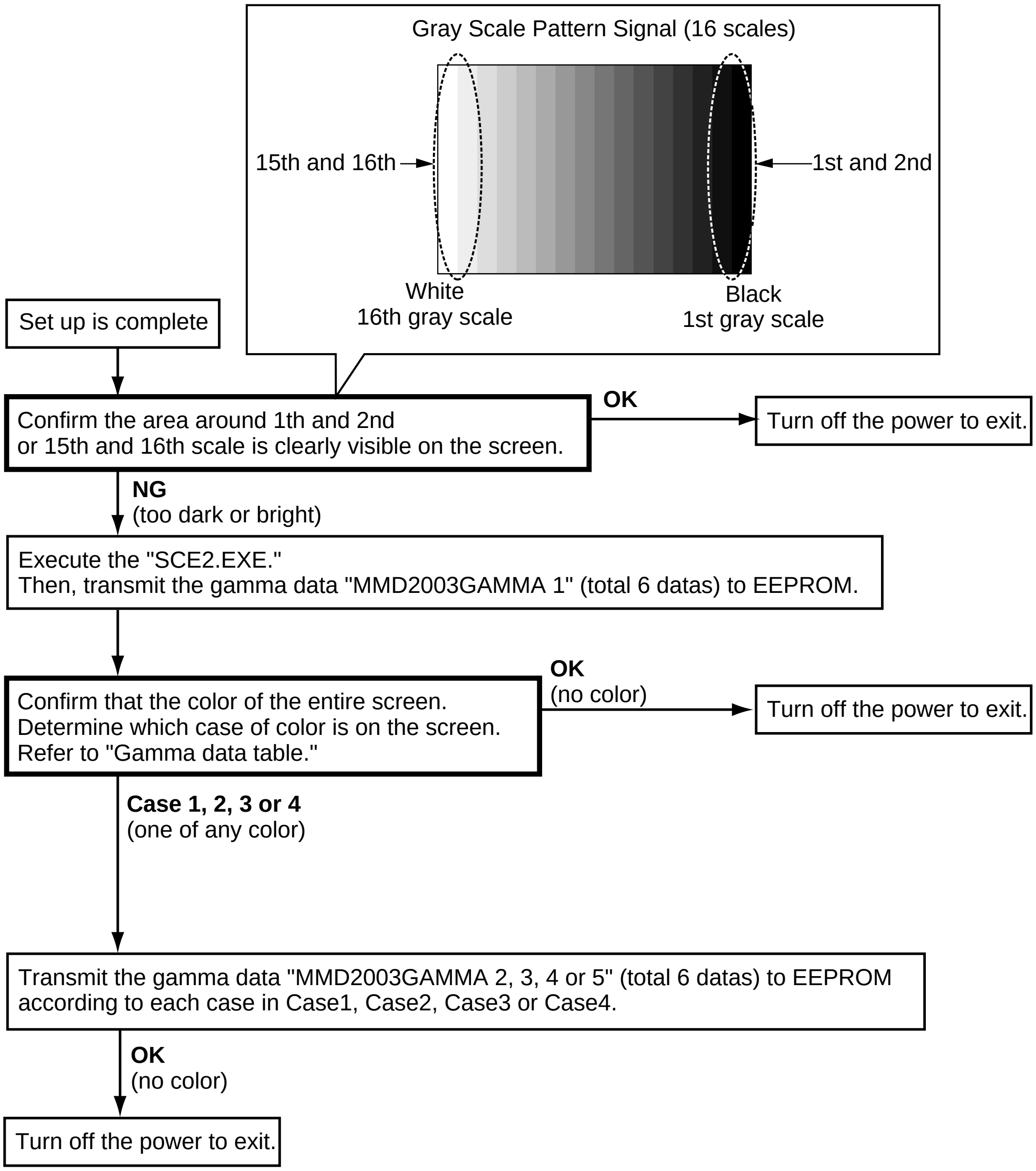
SET UP:

1. Connect the PC (1) and P2301 on the LCD Drive C.B.A. with the RS232C I/F Tool and the D-Sub 9 Pin Serial (RS232C) Cable.
2. Install the software (2) into the PC(1).
   1) Copy the "SCE2 (7 items)" folder to any drive.

Application software	files
Software (2): Sce2	SCE2.EXE SCE2.CNT Sce2.GID Command.log README.TXT SCE2.HLP GAMMA_USUAL.sce

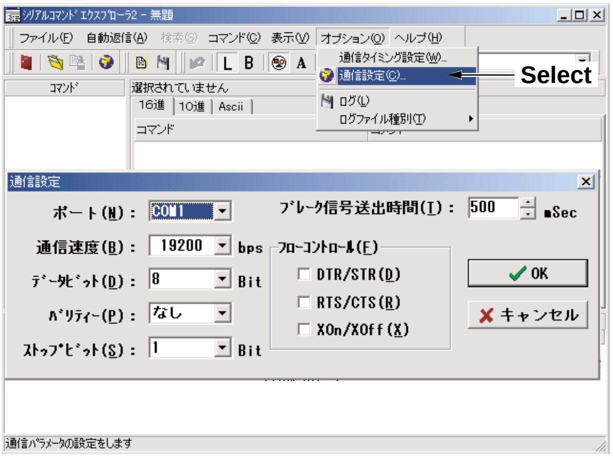
3. To start up the software (2), execute the "SCE2.EXE" by double clicking.
4. Set to PC mode by pressing TV/VIDEO key on the remote.
5. Supply Gray Scale Pattern Signal (16 scales): "1 White 16 grade (Horiz)" in "Bar Reverse" of Test Pattern Signal from PC(2).
6. Set the FULL mode by pressing ASPECT key.

PROCEDURES:


Gray Scale Pattern Signal (16 scales)
15th and 16th
1st and 2nd
White
16th gray scale
Black
1st gray scale
Set up is complete
Confirm the area around 1th and 2nd
or 15th and 16th scale is clearly visible on the screen.
OK
Turn off the power to exit.
NG
(too dark or bright)
Execute the "SCE2.EXE."
Then, transmit the gamma data "MMD2003GAMMA 1" (total 6 datas) to EEPROM.
Confirm that the color of the entire screen.
Determine which case of color is on the screen.
Refer to "Gamma data table."
OK
(no color)
Turn off the power to exit.
Case 1, 2, 3 or 4
(one of any color)
Transmit the gamma data "MMD2003GAMMA 2, 3, 4 or 5" (total 6 datas) to EEPROM
according to each case in Case1, Case2, Case3 or Case4.
OK
(no color)
Turn off the power to exit.

How to transfer the gamma data using the software (2):

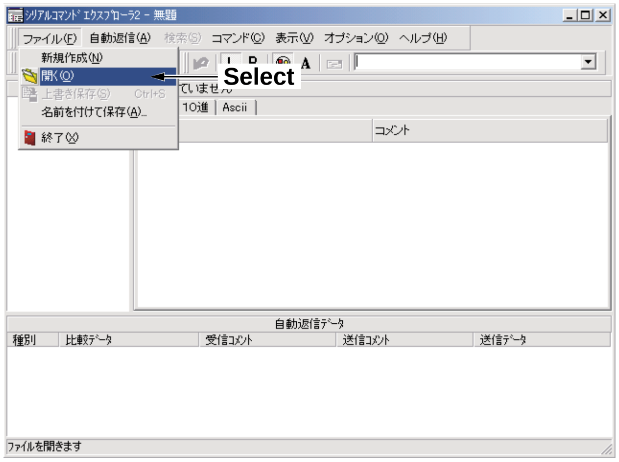
1. Execute the "SCE2.EXE" file by double clicking. The start-up menu will appear.
2. Select "(C)" on option pull-down menu, and confirm the transmission setting as shown.


シリアルコマンド エクスプローラ2 - 無題
ファイル(F) 自動返信(A) 検索(S) コマンド(C) 表示(V) オプション(O) ヘルプ(H)
通信タイミング設定(W)...
通信設定(C)...
ログ(L)
ログファイル種別(T)
Select
通信設定
OK
キャンセル

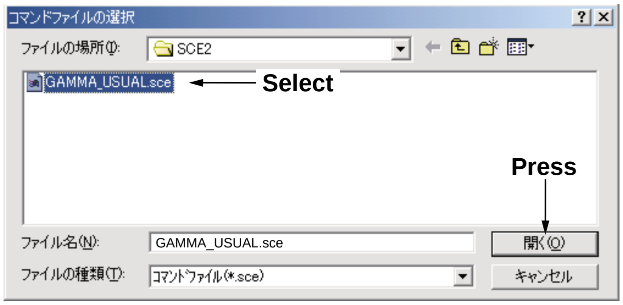
ポート(N) : COM1
通信速度(B) : 19200 bps
データビット(D) : 8 Bit
パリティー(P) : なし
ストップビット(S) : 1 Bit
ブレーク信号送出時間(T) : 500 mSec
フローコントロール(F)
☐ DTR/STR(D)
☐ RTS/CTS(R)
☐ XOn/XOff(X)

通信パラメータの設定をします

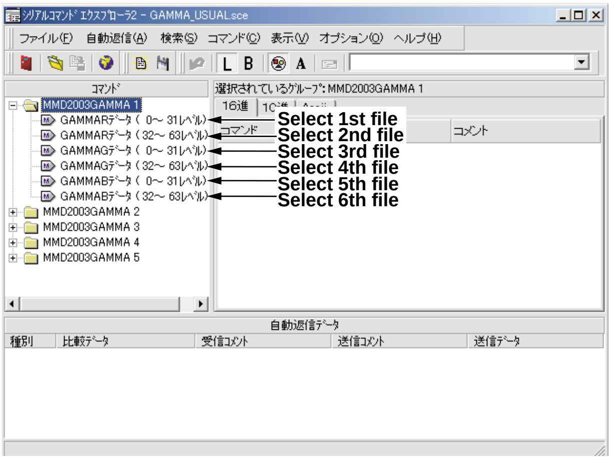
3. Select "(O)" on file pull-down menu.


シリアルコマンド エクスプローラ2 - 無題
ファイル(F) 自動返信(A) 検索(S) コマンド(C) 表示(V) オプション(O) ヘルプ(H)
新規作成(N)
開く(O)
上書き保存(S) Ctrl+S
名前を付けて保存(A)...
終了(X)
Select
ファイルを開きます

4. Select "GAMMA_USUAL.sce" file, and press "Open."


コマンドファイルの選択
ファイルの場所(I): SCE2
GAMMA_USUAL.sce
Select
Press
ファイル名(N): GAMMA_USUAL.sce
ファイルの種類(T): コマンドファイル(*.sce)
開く(O)
キャンセル

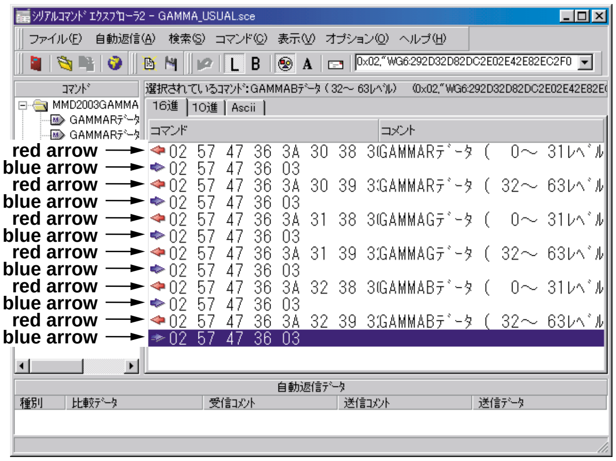
5. Select desired gamma data of "MMD2003GAMMA" folder (MMD2003GAMMA 1-5). Then, double click the 1st, 2nd, 3rd, 4th, 5th and 6th files in order.


シリアルコマンド エクスプローラ2 - GAMMA_USUAL.sce
選択されているグループ: MMD2003GAMMA 1
MMD2003GAMMA 1
GAMMARデータ (0〜 31レベル)
GAMMARデータ (32〜 63レベル)
GAMMAGデータ (0〜 31レベル)
GAMMAGデータ (32〜 63レベル)
GAMMABデータ (0〜 31レベル)
GAMMABデータ (32〜 63レベル)
MMD2003GAMMA 2
MMD2003GAMMA 3
MMD2003GAMMA 4
MMD2003GAMMA 5
Select 1st file
Select 2nd file
Select 3rd file
Select 4th file
Select 5th file
Select 6th file
自動返信データ

When the file is double clicked, the transmission will start. The red arrow will appear, and then the blue arrow appear. First, a red arrow will appear, then a blue arrow. The red and blue arrows will appear alternately.

Note:

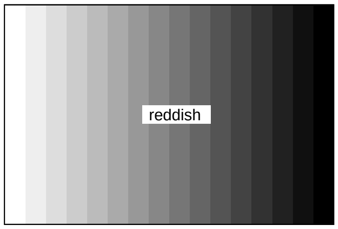
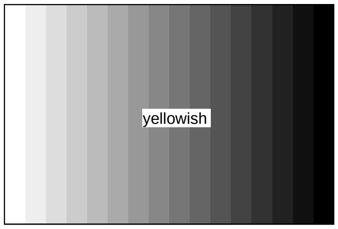
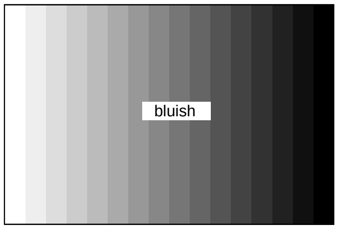
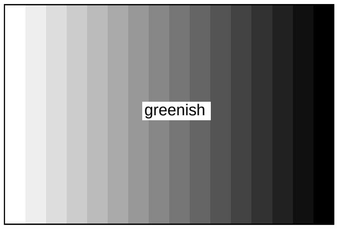
If the blue arrow does not appear or the "Error" indication appears, transmission has failed. In this case, double click the file again until the blue arrow appears.


シリアルコマンド エクスプローラ2 - GAMMA_USUAL.sce
ファイル(F) 自動返信(A) 検索(S) コマンド(C) 表示(V) オプション(O) ヘルプ(H)
red arrow
blue arrow
red arrow
blue arrow
red arrow
blue arrow
red arrow
blue arrow
red arrow
blue arrow
red arrow
blue arrow
自動返信データ

選択されているコマンド:GAMMABデータ (32〜 63レベル) (0x02,"WG6:292D32D82DC2E02E42E82E(

```
02 57 47 36 3A 30 38 3(GAMMARデータ (  0〜 31レベル
02 57 47 36 03
02 57 47 36 3A 30 39 3:GAMMARデータ ( 32〜 63レベル
02 57 47 36 03
02 57 47 36 3A 31 38 3(GAMMAGデータ (  0〜 31レベル
02 57 47 36 03
02 57 47 36 3A 31 39 3:GAMMAGデータ ( 32〜 63レベル
02 57 47 36 03
02 57 47 36 3A 32 38 3(GAMMABデータ (  0〜 31レベル
02 57 47 36 03
02 57 47 36 3A 32 39 3:GAMMABデータ ( 32〜 63レベル
02 57 47 36 03
```

<Gamma data table>

	color <on screen>	data folder
Case1		MMD2003GAMMA 2 (6 files)
Case2		MMD2003GAMMA 3 (6 files)
Case3		MMD2003GAMMA 4 (6 files)
Case4		MMD2003GAMMA 5 (6 files)

3. NON-UNIFORMITY COLOR CORRECTION (Compensation by transmitting color correction data)

Note:
When replacing the LCD Drive C.B.A., the Optical Block Unit, the LCD/Prism Unit or IC2301 (32k EEPROM), confirm the color uniformity on the screen. If the non-uniformity color appears, perform this correction.

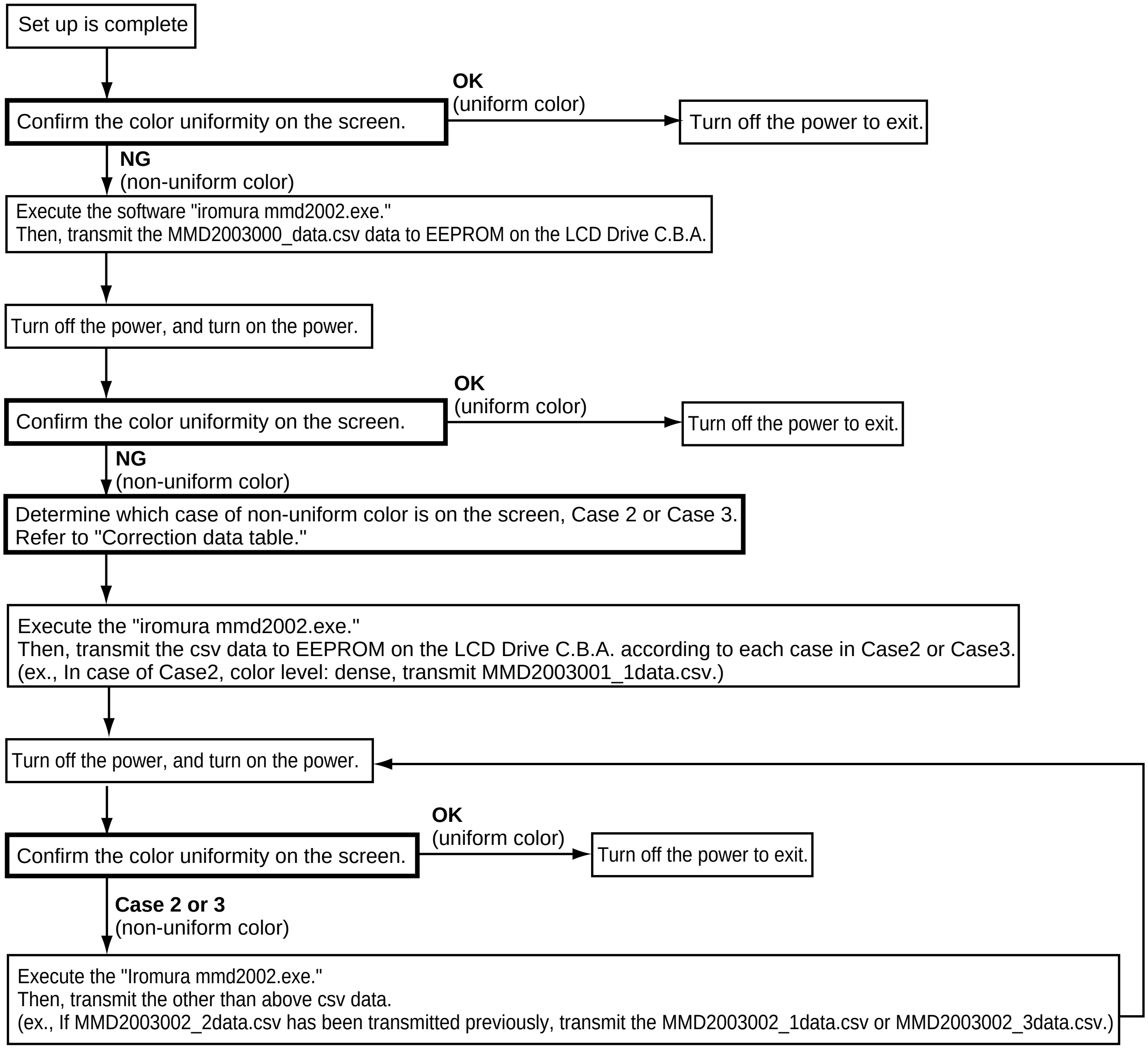
SET UP:

1. Connect the PC (1) and P2301 on the LCD Drive C.B.A. with the RS232C I/F Tool and the D-Sub 9 Pin Serial (RS232C) Cable.
2. Install the software (3) into the PC(1).
   1) Copy the "iromura (8 items)" folder to any drive.

Application software	files
Software (3): Iromura	iromura mmd2002.exe MMD2003000_data.csv MMD2003001_1data.csv MMD2003001_2data.csv MMD2003001_3data.csv MMD2003002_1data.csv MMD2003002_2data.csv MMD2003002_3data.csv

3. To start up the software (2), execute the "iromura mmd2002.exe" by double clicking.
4. Set to PC mode by pressing TV/VIDEO key on the remote.
5. Supply 50% White Pattern Signal: "9 Gray" in "1 Color" from PC(2).
6. Set the FULL mode by pressing ASPECT key.

PROCEDURES:



Set up is complete

Confirm the color uniformity on the screen.

Turn off the power to exit.

Execute the software "iromura mmd2002.exe."
Then, transmit the MMD2003000_data.csv data to EEPROM on the LCD Drive C.B.A.

Turn off the power, and turn on the power.

Confirm the color uniformity on the screen.

Turn off the power to exit.

Determine which case of non-uniform color is on the screen, Case 2 or Case 3.
Refer to "Correction data table."

Execute the "iromura mmd2002.exe."
Then, transmit the csv data to EEPROM on the LCD Drive C.B.A. according to each case in Case2 or Case3.
(ex., In case of Case2, color level: dense, transmit MMD2003001_1data.csv.)

Turn off the power, and turn on the power.

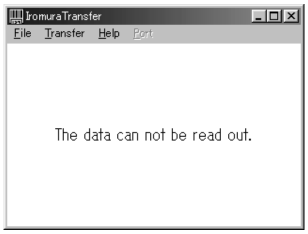
Confirm the color uniformity on the screen.

Turn off the power to exit.

Execute the "Iromura mmd2002.exe."
Then, transmit the other than above csv data.
(ex., If MMD2003002_2data.csv has been transmitted previously, transmit the MMD2003002_1data.csv or MMD2003002_3data.csv.)

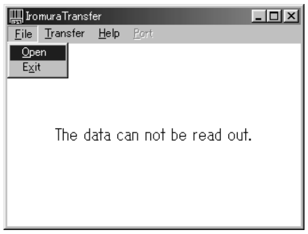
How to transfer the csv data (correction data) using the software (3):

1. Execute the "Iromura mmd2002.exe" file by double click.


IromuraTransfer
File
Transfer
Help
Port

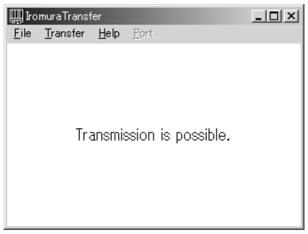
The data can not be read out.

2. Select "Open" on File menu.


IromuraTransfer
File
Transfer
Help
Port
Open
Exit

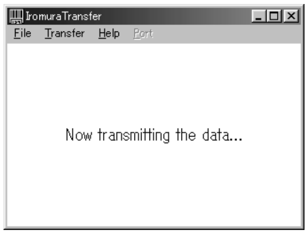
The data can not be read out.

3. Select the desired csv data file (MMD2003000_data.csv, MMD2003001_1data.csv, etc.). The following dialog will appear.


IromuraTransfer
File
Transfer
Help
Port

Transmission is possible.

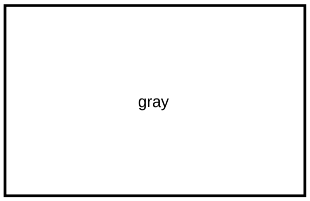
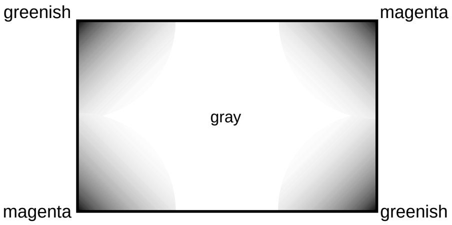
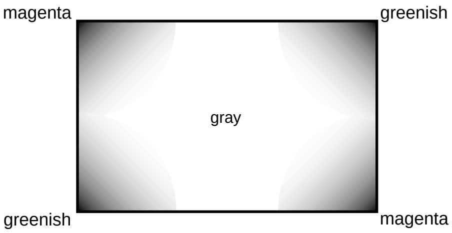
4. Select "Start" on Transfer menu. The transmission starts, and the data transmission takes for approx. 20 seconds. The data will be stored in the EEPROM.


IromuraTransfer
File
Transfer
Help
Port

Now transmitting the data...

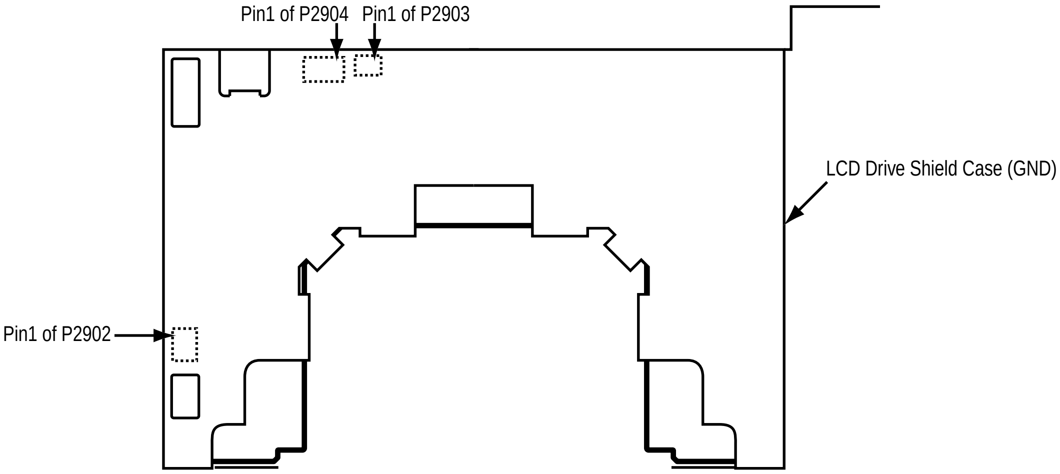
5. "End" will appear on a PC Monitor after transmission.

<Correction data table>

	Non-uniform color <on screen>	color level	csv data file
Case1		uniformity color	MMD2003000_data.csv
Case2	 greenish magenta gray magenta greenish	dense	MMD2003001_1data.csv
		denser	MMD2003001_2data.csv
		densest	MMD2003001_3data.csv
Case3	 magenta greenish gray greenish magenta	dense	MMD2003002_1data.csv
		denser	MMD2003002_2data.csv
		densest	MMD2003002_3data.csv

TEST POINTS AND LOCATION

LCD Drive C.B.A.


Pin1 of P2904
Pin1 of P2903
LCD Drive Shield Case (GND)
Pin1 of P2902

(Component Side)

Test Point Information

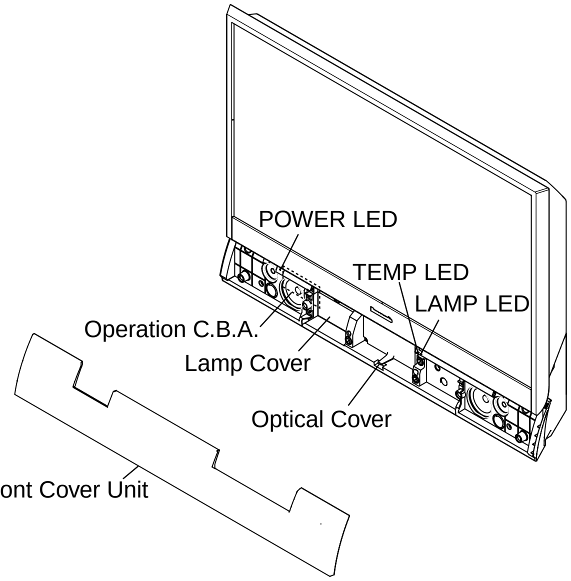
- ● Test Point with a Test Pin.
- ⦶ Test Point with a jumper wire across a hole in the P.C.B.
- ○ Test Point with no Test Pin.
- ▭ Test Point with a Hook.

10 TROUBLESHOOTING HINTS

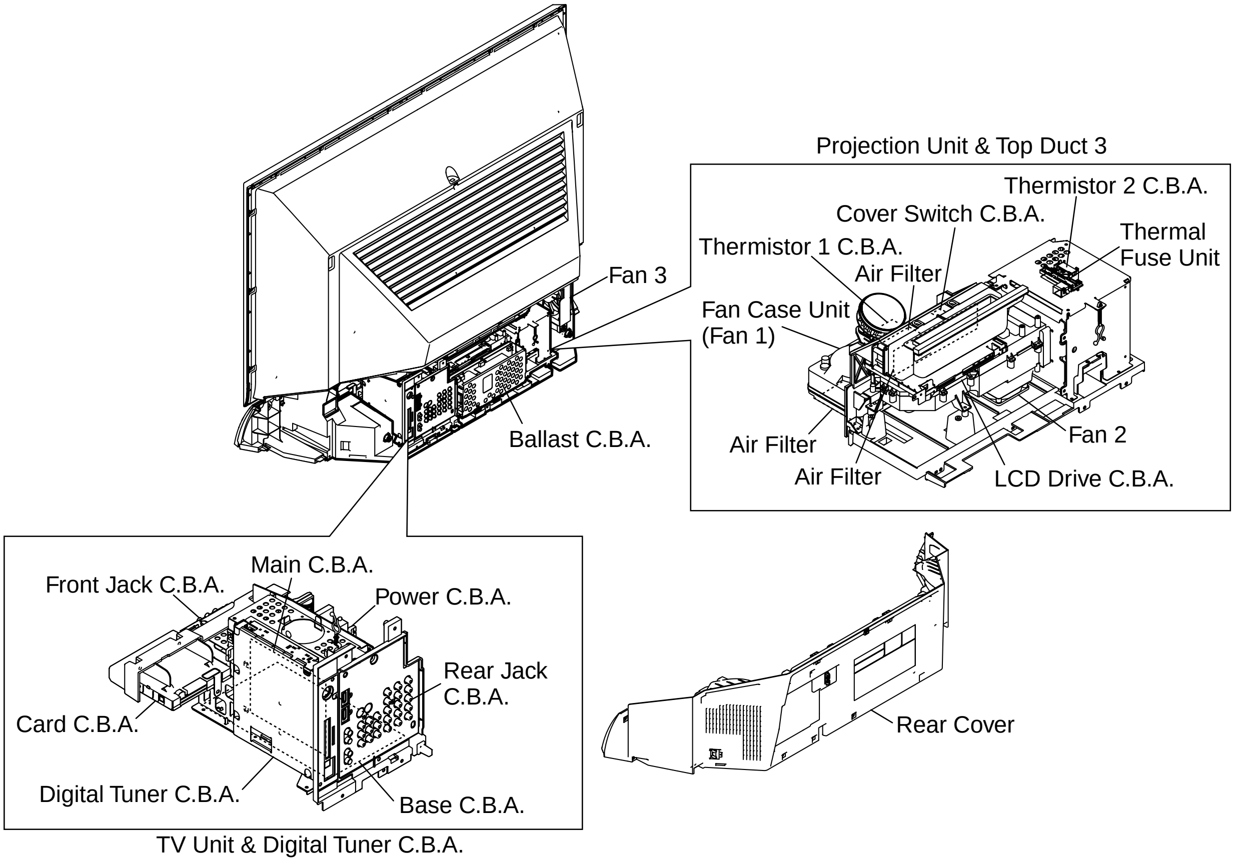
10.1. TROUBLESHOOTING HINTS FOR BLOCK LEVEL REPAIR

MAIN PARTS LOCATION

<Front View>

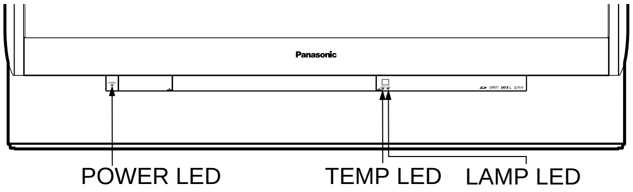

POWER LED
TEMP LED
LAMP LED
Operation C.B.A.
Lamp Cover
Optical Cover
Front Cover Unit

<Rear View>


Projection Unit & Top Duct 3
Thermistor 2 C.B.A.
Cover Switch C.B.A.
Thermal Fuse Unit
Thermistor 1 C.B.A.
Air Filter
Fan 3
Fan Case Unit (Fan 1)
Ballast C.B.A.
Air Filter
Fan 2
Air Filter
LCD Drive C.B.A.
Main C.B.A.
Front Jack C.B.A.
Power C.B.A.
Rear Jack C.B.A.
Card C.B.A.
Rear Cover
Digital Tuner C.B.A.
Base C.B.A.
TV Unit & Digital Tuner C.B.A.

LED INDICATIONS FOR ERROR CONDITION

Each LED indication facilitates finding the cause of the error.
When an error is detected, the Lamp comes off and the LED on the front will flash.



					(Note 2)	(Note 3)
Error No.	**Error Information**	**POWER LED**	**TEMP LED**	**LAMP LED**	**OSD**	**LAMP OFF**
1)	**Fan1, Fan2 or Fan3 stopped**	flashes orange once every 5 seconds	-	-		○
2)	**Lamp Cover open**	flashes orange twice every 5 seconds	-	-		○
3)	**Temperature Sensor shorted or open (Thermistor 1 C.B.A.)**	-	flashes once every 5 seconds	-		○
4)	**Abnormal Temperature (Thermistor 1 C.B.A.)**	-	flashes twice every 5 seconds	-		○
5)	**Ballast Error (abnormal Lamp or Ballast)**	-	-	flashes once every 5 seconds		○
6)	**Ballast Error (abnormal Lamp voltage)**	-	-	flashes twice every 5 seconds		○
7)	**Ballast Error (abnormal temperature)**	-	-	flashes 3 times every 5 seconds		○
8)	**Ballast Error (other causes)**	-	-	flashes 4 times every 5 seconds		○
9)	**Abnormal Voltage (+17V, +9V, +5V line) for LCD Drive C.B.A.**	flashes orange 7 times every 5 seconds	flashes 3 times every 5 seconds	flashes 3 times every 5 seconds		○
10)	**Temperature Sensor shorted or open (Thermistor 2 C.B.A.)**	-	flashes 3 times every 5 seconds	-		○
11)	**Abnormal Temperature (Thermistor 2 C.B.A.)**	-	flashes 4 times every 5 seconds	-		○
12)	**Clogged air filter**	-	flashes 5 times every 5 seconds	-	○	○

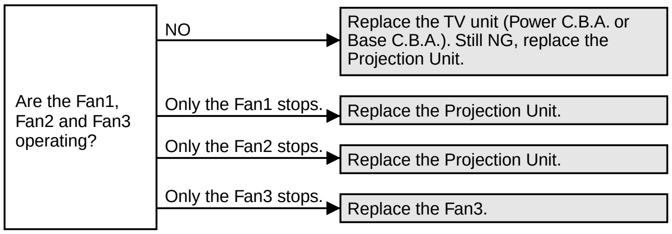
Note:

1. When two or more errors have occurred at the same time, the LED will alternate flash patterns as shown above every 5 seconds.
2. Warning OSD appears when the air filter is clogged.
3. LAMP OFF: The LED will flash immediately after the Lamp comes off.

How to solve the problem indicated by the Error Indication of LED

(All symptom is that Lamp turns off or Lamp does not light up)

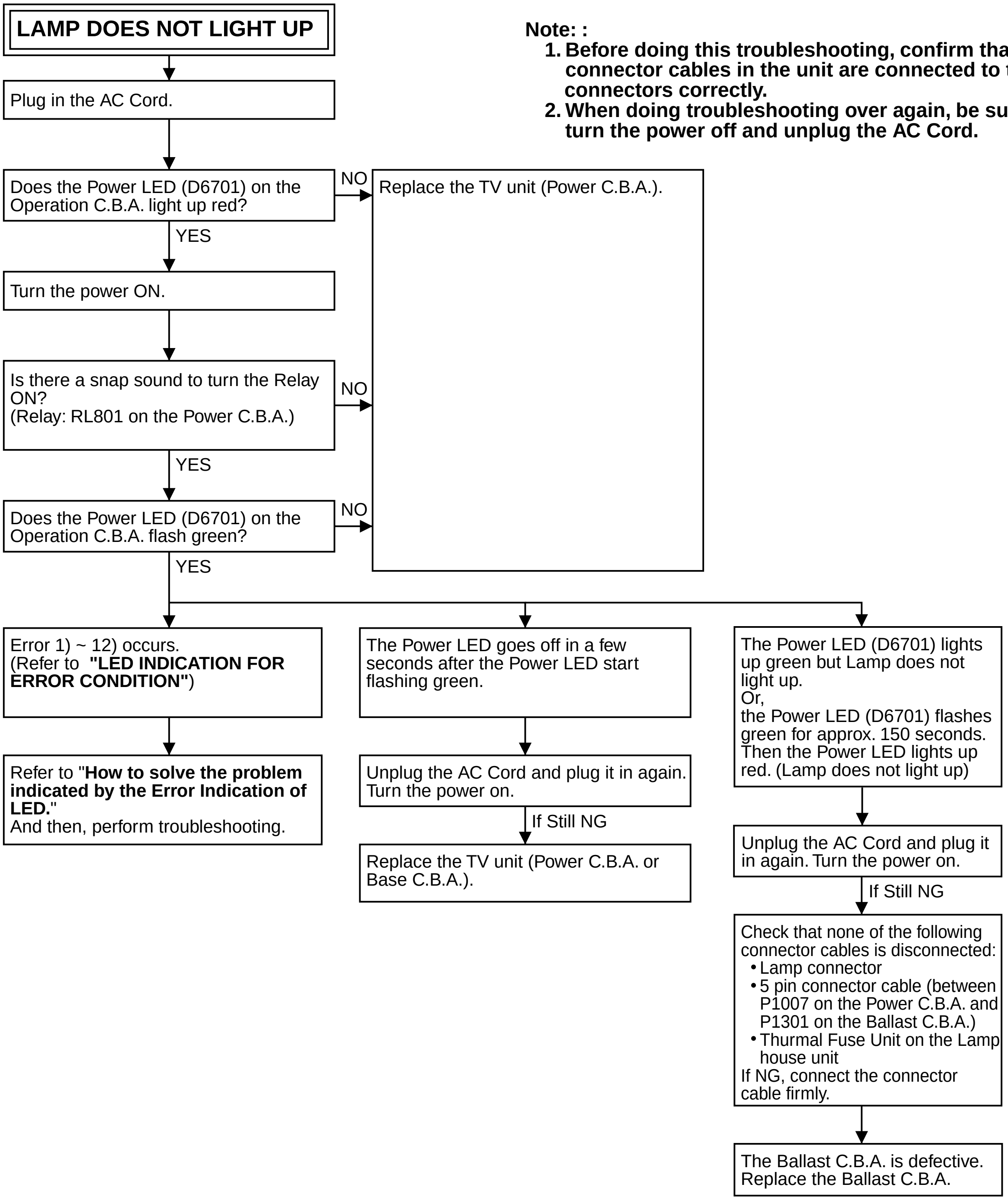
Note: Before performing the troubleshooting, confirm that all connector cables in the unit are connected to connectors correctly.

Error No.	Problem	Possible Solution
1)	Cooling Fan (Fan1, Fan2 and/or Fan3) malfunction.	 Are the Fan1, Fan2 and Fan3 operating? NO Replace the TV unit (Power C.B.A. or Base C.B.A.). Still NG, replace the Projection Unit. Only the Fan1 stops. Replace the Projection Unit. Only the Fan2 stops. Replace the Projection Unit. Only the Fan3 stops. Replace the Fan3.
2)	Mis-installed the Lamp Cover (the Lamp cover is open).	1. Tighten the screw of the Lamp Cover. 2. If still NG, replace the Cover SW (SW2911) on the Cover Switch C.B.A. 3. If still NG, replace the TV unit (Main C.B.A.).
3)	The temperature sensor (R2811) on the Thermistor 1 C.B.A. on the Fan 1 is short or open.	Remove P2302 connector on the LCD Drive C.B.A. and check if the resistance between pin1 and pin2 of P2811 on the Thermistor 1 C.B.A. is 5kΩ～200kΩ. If NG, replace the Temperature Sensor (R2811) on the Thermistor 1 C.B.A. Still NG, replace the Projection Unit. Still NG, replace the Main C.B.A. **Note:** The Projection Unit includes LCD Drive C.B.A.
4)	It indicates when the temperature detected by the Temperature Sensor (R2811) on Thermistor 1 C.B.A. exceeds 55 ˚C (131 ˚F). 1. The surrounding temperature of the place of use may be too high. 2. The vents on the rear may be blocked.	1. Relocate the unit to a proper location. • Do not place in direct sunlight and other sources of direct heat. • Do not place the unit in humid or dusty location, or areas exposed to smokeor steam. (surrounding temperature should be between 0 ˚C (32 ˚F) and 40 ˚C (104 ˚F) and humidity should be between 20 % and 80 % (with no condensation).) • The vents are not blocked. It is recommended that a gap of at least 10 cm is left all around the unit even when it is placed inside a cabinet or between shelves. 2. Check if the fans are operating properly.
5)	1. The Lamp is not cooled off. 2. Thermal Fuse Unit (115˚C (239˚F)) is defective (open). 3. The Lamp is defective (crack). 4. The Lamp voltage becomes more over 130V or less than 30V. 5. The Ballast C.B.A. is defective. 6. The Main C.B.A. is defective.	1. Confirm that the Thermal Fuse Unit (115˚C(239˚F)) on the Lamp House is not open. 2. Wait until the Lamp is cooled off and try to turn the power back on. If same error LED indication continues, remove the Lamp and visually inspect it. If it is cracked, it must be replaced. If the Lamp is not cracked, replace the Ballast C.B.A. 3. If still NG, replace the TV unit (Main C.B.A.).
6)	The Lamp is defective (short of the Lamp).	Replace the Lamp.
7)	Thermal fuse (F1302) 117 ˚C (243 ˚F) on the Ballast C.B.A. is open due to abnormal temperature rise.	Replace the Ballast C.B.A.
8)	The Ballast C.B.A. is defective.	If the Lamp does not light up after attempting turning on the power 2 or 3 times, replace the Ballast C.B.A.
9)	1. +17V line on the LCD Drive C.B.A. error. 2. +9V line on the LCD Drive C.B.A. error. 3. +5V line on the LCD Drive C.B.A. error.	1. Replace the TV unit (Power C.B.A. or Base C.B.A.). 2. If still NG, replace the Projection Unit (LCD Drive C.B.A.).
10)	The temperature sensor (R2821) on the Thermistor 2 C.B.A. on the Lamp House is short or open.	Remove P2303 connector on the LCD Drive C.B.A. and check if the resistance between pin1 and pin2 of P2821 on the Thermistor 2 C.B.A. is 5kΩ～1MΩ. If NG, replace the Temperature Sensor (R2821) on the Thermistor 2 C.B.A. Still NG, replace the Projection Unit. Still NG, replace the Main C.B.A. **Note:** The Projection Unit includes LCD Drive C.B.A.
11)	It indicates when the temperature detected by the Temperature Sensor (R2821) on Thermistor 2 C.B.A. exceeds 105 ˚C (221 ˚F). 1. The surrounding temperature of the place of use may be too high. 2. The vents on the rear may be blocked.	1. Relocate the unit to a proper location. • Do not place in direct sunlight and other sources of direct heat. • Do not place the unit in humid or dusty location, or areas exposed to smokeor steam. (surrounding temperature should be between 0 ˚C (32 ˚F) and 40 ˚C (104 ˚F) and humidity should be between 20 % and 80 % (with no condensation).) • The vents are not blocked. It is recommended that a gap of at least 10 cm is left all around the unit even when it is placed inside a cabinet or between shelves. 2. Check if the fans are operating properly.
12)	Clogged air filter of the Fan Case Unit.	1. Cleaning the Air Filter on the Projection Unit. 2. If still NG, replace the Projection Unit. 3. If still NG, replace the TV unit (Main C.B.A.).

LAMP DOES NOT LIGHT UP

Note: :

1. **Before doing this troubleshooting, confirm that all connector cables in the unit are connected to the connectors correctly.**
2. **When doing troubleshooting over again, be sure to turn the power off and unplug the AC Cord.**



LAMP DOES NOT LIGHT UP

Plug in the AC Cord.

Does the Power LED (D6701) on the Operation C.B.A. light up red?

Turn the power ON.

Is there a snap sound to turn the Relay ON?
(Relay: RL801 on the Power C.B.A.)

Does the Power LED (D6701) on the Operation C.B.A. flash green?

Replace the TV unit (Power C.B.A.).

Error 1) ~ 12) occurs.
(Refer to **"LED INDICATION FOR ERROR CONDITION"**)

Refer to "**How to solve the problem indicated by the Error Indication of LED.**"
And then, perform troubleshooting.

The Power LED goes off in a few seconds after the Power LED start flashing green.

Unplug the AC Cord and plug it in again. Turn the power on.

Replace the TV unit (Power C.B.A. or Base C.B.A.).

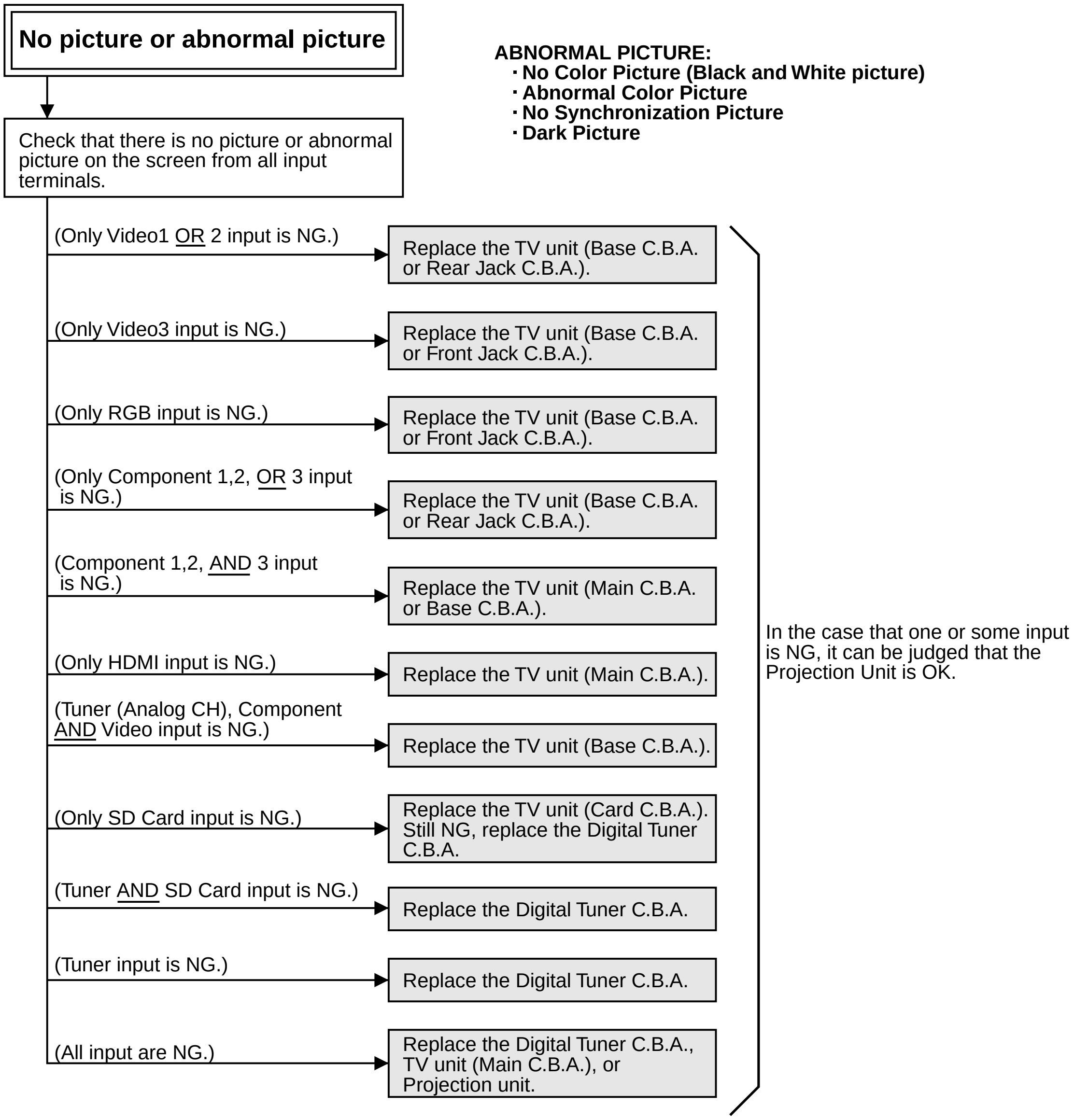
The Power LED (D6701) lights up green but Lamp does not light up.
Or,
the Power LED (D6701) flashes green for approx. 150 seconds. Then the Power LED lights up red. (Lamp does not light up)

Unplug the AC Cord and plug it in again. Turn the power on.

Check that none of the following connector cables is disconnected:
- Lamp connector
- 5 pin connector cable (between P1007 on the Power C.B.A. and P1301 on the Ballast C.B.A.)
- Thurmal Fuse Unit on the Lamp house unit

If NG, connect the connector cable firmly.

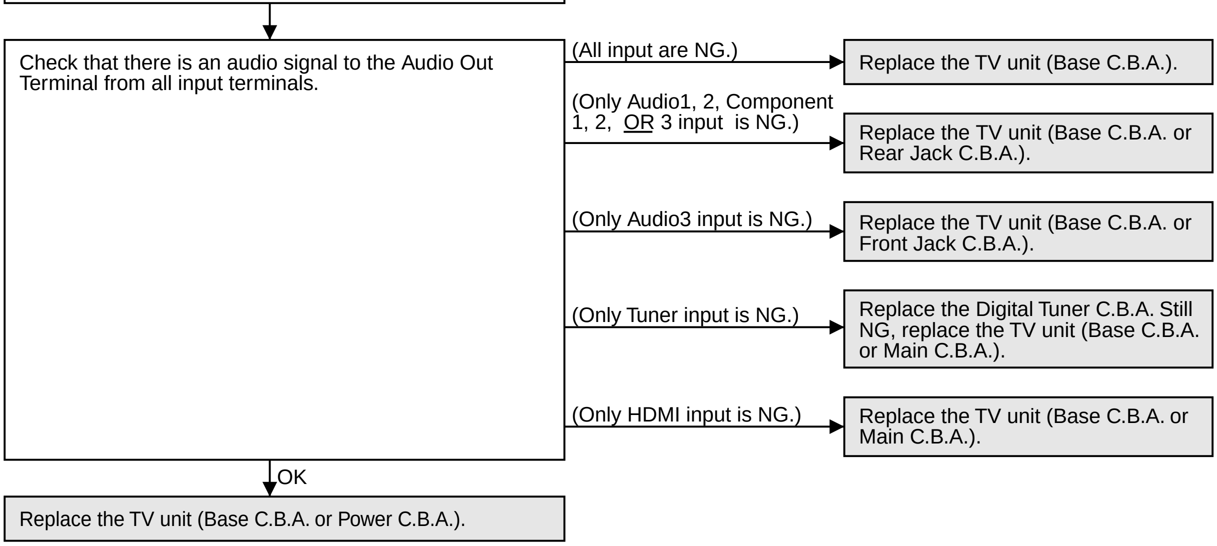
The Ballast C.B.A. is defective. Replace the Ballast C.B.A.


No picture or abnormal picture
Check that there is no picture or abnormal picture on the screen from all input terminals.
(Only Video1 OR 2 input is NG.)
Replace the TV unit (Base C.B.A. or Rear Jack C.B.A.).
(Only Video3 input is NG.)
Replace the TV unit (Base C.B.A. or Front Jack C.B.A.).
(Only RGB input is NG.)
Replace the TV unit (Base C.B.A. or Front Jack C.B.A.).
(Only Component 1,2, OR 3 input is NG.)
Replace the TV unit (Base C.B.A. or Rear Jack C.B.A.).
(Component 1,2, AND 3 input is NG.)
Replace the TV unit (Main C.B.A. or Base C.B.A.).
(Only HDMI input is NG.)
Replace the TV unit (Main C.B.A.).
(Tuner (Analog CH), Component AND Video input is NG.)
Replace the TV unit (Base C.B.A.).
(Only SD Card input is NG.)
Replace the TV unit (Card C.B.A.). Still NG, replace the Digital Tuner C.B.A.
(Tuner AND SD Card input is NG.)
Replace the Digital Tuner C.B.A.
(Tuner input is NG.)
Replace the Digital Tuner C.B.A.
(All input are NG.)
Replace the Digital Tuner C.B.A., TV unit (Main C.B.A.), or Projection unit.
In the case that one or some input is NG, it can be judged that the Projection Unit is OK.

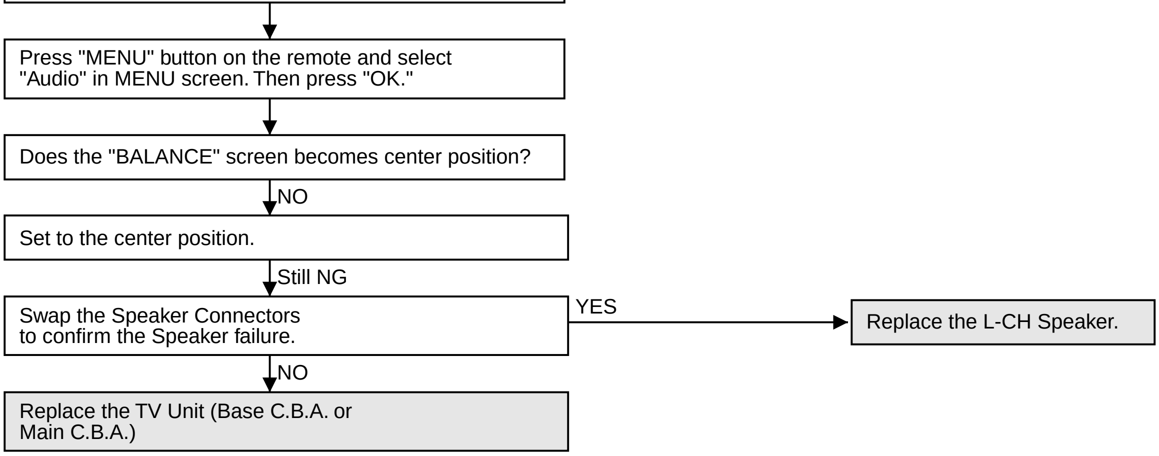
ABNORMAL PICTURE:

- **No Color Picture (Black and White picture)**
- **Abnormal Color Picture**
- **No Synchronization Picture**
- **Dark Picture**

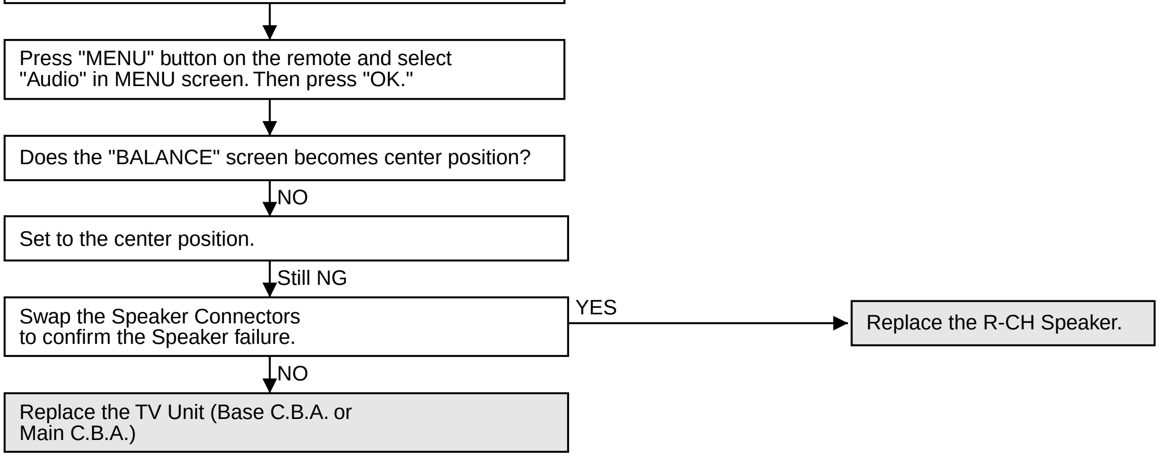
No sound from built-in both L-CH and R-CH Speakers


Check that there is an audio signal to the Audio Out Terminal from all input terminals.
(All input are NG.)
Replace the TV unit (Base C.B.A.).
(Only Audio1, 2, Component 1, 2, OR 3 input is NG.)
Replace the TV unit (Base C.B.A. or Rear Jack C.B.A.).
(Only Audio3 input is NG.)
Replace the TV unit (Base C.B.A. or Front Jack C.B.A.).
(Only Tuner input is NG.)
Replace the Digital Tuner C.B.A. Still NG, replace the TV unit (Base C.B.A. or Main C.B.A.).
(Only HDMI input is NG.)
Replace the TV unit (Base C.B.A. or Main C.B.A.).
OK
Replace the TV unit (Base C.B.A. or Power C.B.A.).

No sound from built-in L-CH Speaker only


Press "MENU" button on the remote and select "Audio" in MENU screen. Then press "OK."
Does the "BALANCE" screen becomes center position?
NO
Set to the center position.
Still NG
Swap the Speaker Connectors to confirm the Speaker failure.
YES
Replace the L-CH Speaker.
NO
Replace the TV Unit (Base C.B.A. or Main C.B.A.)

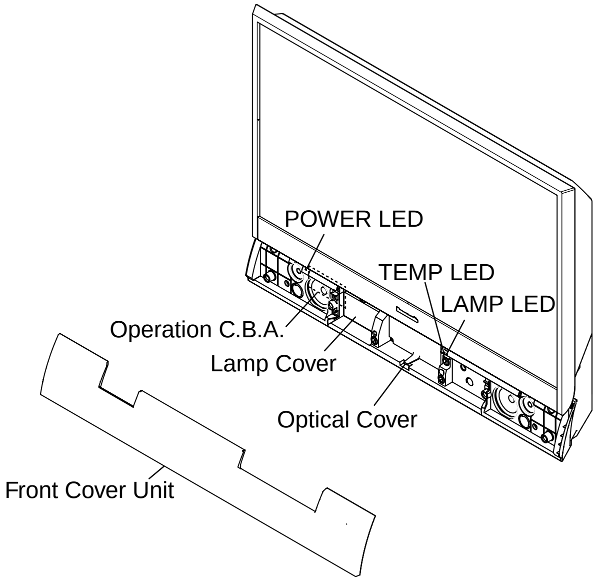
No sound from built-in R-CH Speaker only


Press "MENU" button on the remote and select "Audio" in MENU screen. Then press "OK."
Does the "BALANCE" screen becomes center position?
NO
Set to the center position.
Still NG
Swap the Speaker Connectors to confirm the Speaker failure.
YES
Replace the R-CH Speaker.
NO
Replace the TV Unit (Base C.B.A. or Main C.B.A.)

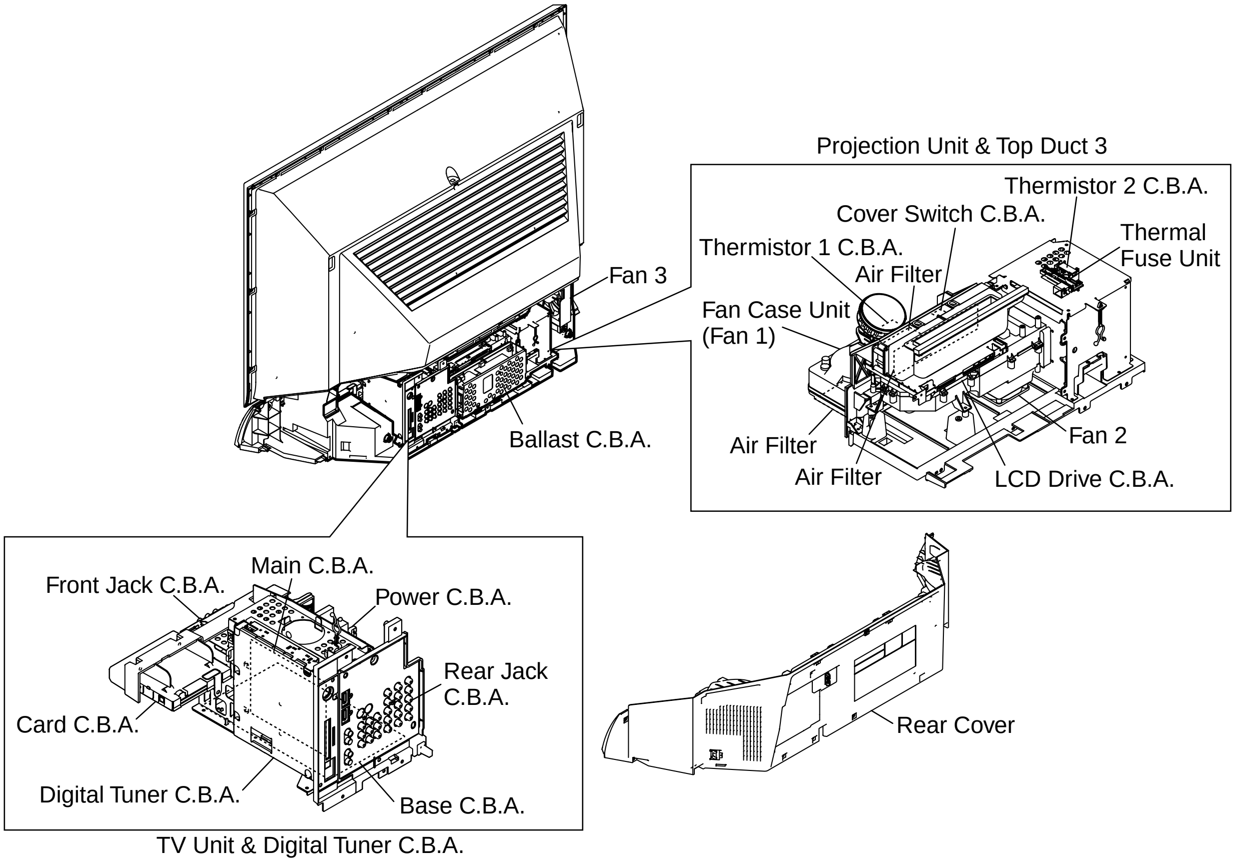
10.2. TROUBLESHOOTING HINTS FOR COMPONENT LEVEL REPAIR

MAIN PARTS LOCATION

<Front View>

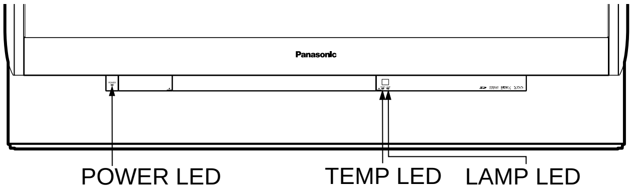

POWER LED
TEMP LED
LAMP LED
Operation C.B.A.
Lamp Cover
Optical Cover
Front Cover Unit

<Rear View>


Projection Unit & Top Duct 3
Thermistor 2 C.B.A.
Cover Switch C.B.A.
Thermal Fuse Unit
Thermistor 1 C.B.A.
Air Filter
Fan 3
Fan Case Unit (Fan 1)
Ballast C.B.A.
Air Filter
Fan 2
Air Filter
LCD Drive C.B.A.
Main C.B.A.
Front Jack C.B.A.
Power C.B.A.
Rear Jack C.B.A.
Card C.B.A.
Rear Cover
Digital Tuner C.B.A.
Base C.B.A.
TV Unit & Digital Tuner C.B.A.

LED INDICATIONS FOR ERROR CONDITION

Each LED indication facilitates finding the cause of the error.
When an error is detected, the Lamp comes off and the LED on the front will flash.



					(Note 2)	(Note 3)
Error No.	**Error Information**	**POWER LED**	**TEMP LED**	**LAMP LED**	**OSD**	**LAMP OFF**
1)	**Fan1, Fan2 or Fan3 stopped**	flashes orange once every 5 seconds	-	-		○
2)	**Lamp Cover open**	flashes orange twice every 5 seconds	-	-		○
3)	**Temperature Sensor shorted or open (Thermistor 1 C.B.A.)**	-	flashes once every 5 seconds	-		○
4)	**Abnormal Temperature (Thermistor 1 C.B.A.)**	-	flashes twice every 5 seconds	-		○
5)	**Ballast Error (abnormal Lamp or Ballast)**	-	-	flashes once every 5 seconds		○
6)	**Ballast Error (abnormal Lamp voltage)**	-	-	flashes twice every 5 seconds		○
7)	**Ballast Error (abnormal temperature)**	-	-	flashes 3 times every 5 seconds		○
8)	**Ballast Error (other causes)**	-	-	flashes 4 times every 5 seconds		○
9)	**Abnormal Voltage (+17V, +9V, +5V line) for LCD Drive C.B.A.**	flashes orange 7 times every 5 seconds	flashes 3 times every 5 seconds	flashes 3 times every 5 seconds		○
10)	**Temperature Sensor shorted or open (Thermistor 2 C.B.A.)**	-	flashes 3 times every 5 seconds	-		○
11)	**Abnormal Temperature (Thermistor 2 C.B.A.)**	-	flashes 4 times every 5 seconds	-		○
12)	**Clogged air filter**	-	flashes 5 times every 5 seconds	-	○	○

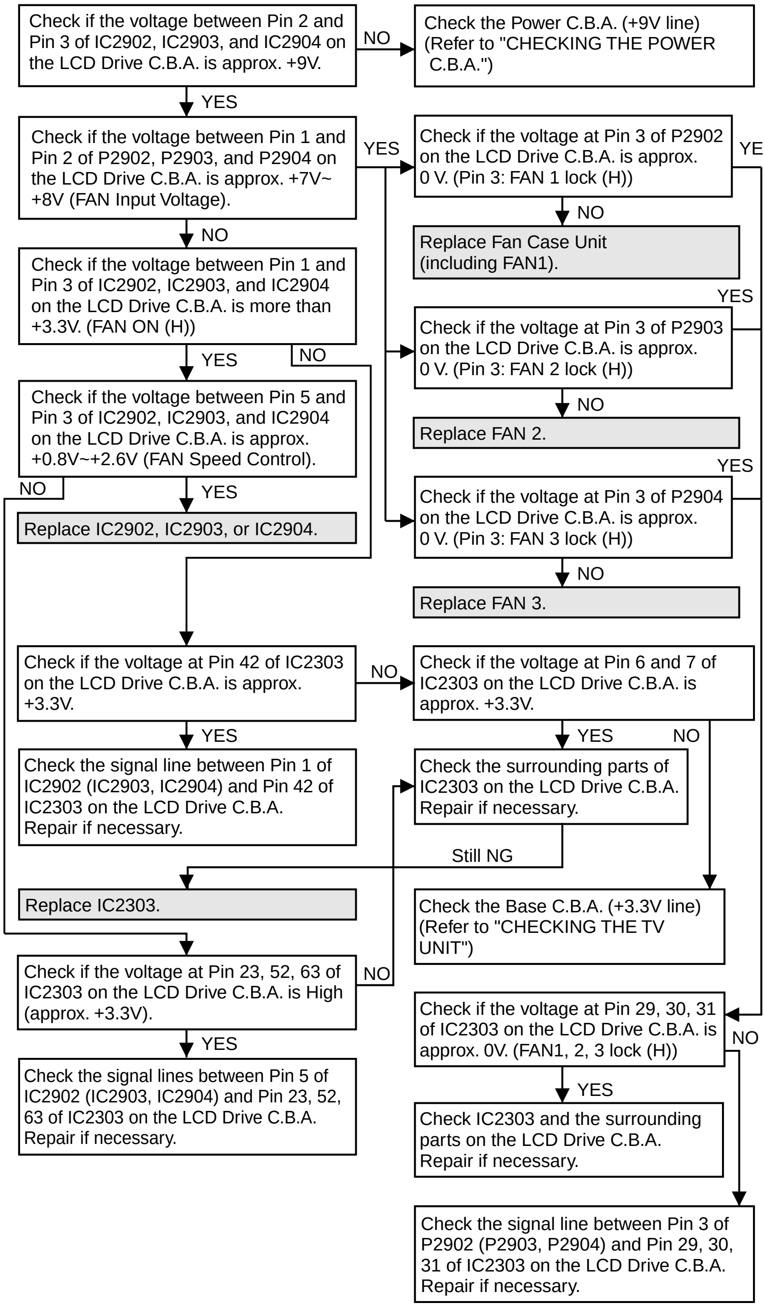
Note:

1. When two or more errors have occurred at the same time, the LED will alternate flash patterns as shown above every 5 seconds.
2. Warning OSD appears when the air filter is clogged.
3. LAMP OFF: The LED will flash immediately after the Lamp comes off.

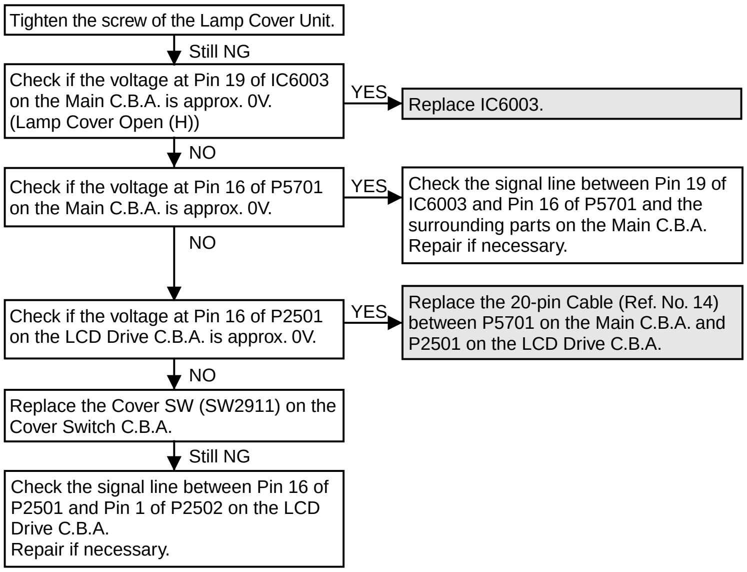
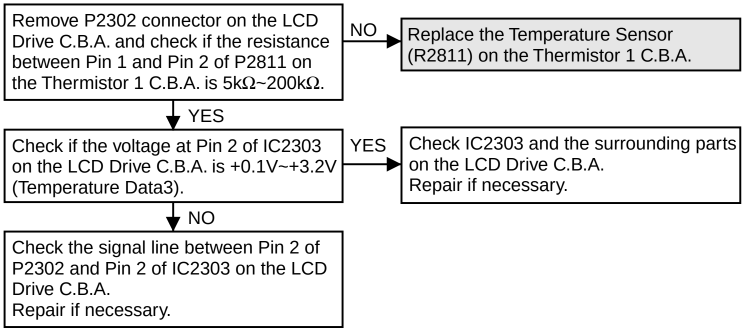
How to solve the problem indicated by the Error Indication of LED

(Key symptom: Lamp does not light up or lights up but then goes out.)

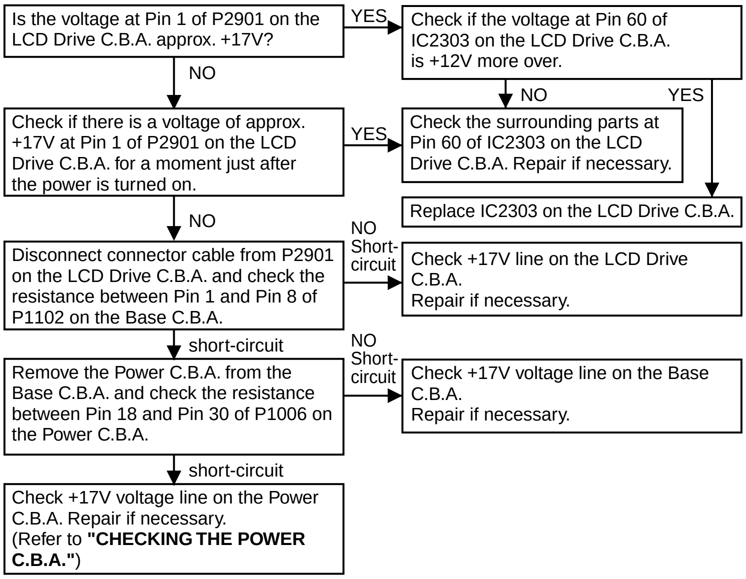
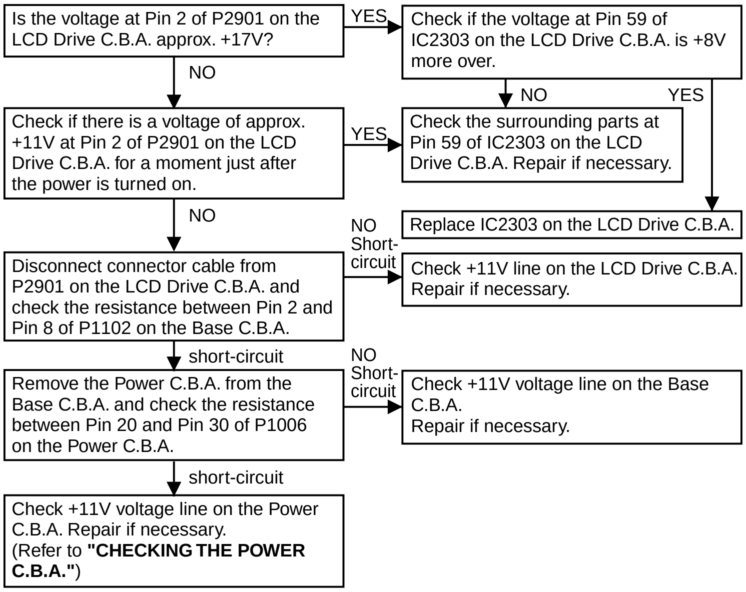
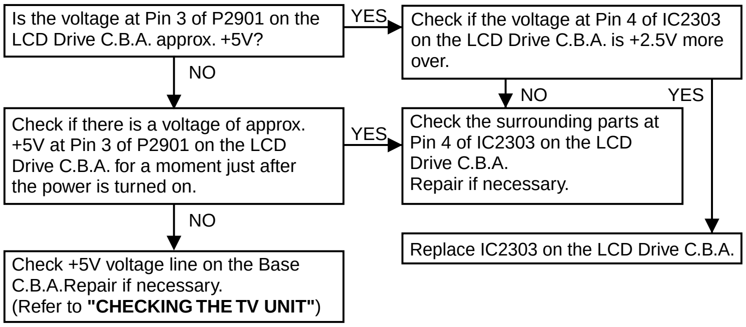
Note: Before performing the troubleshooting, confirm that all connector cables in the unit are connected to connectors correctly.

Error No.	Problem	Possible Solution
1)	Cooling Fan (Fan1, Fan2 and/or Fan3) malfunction.	1. Confirm that all connector cables are connected to the connectors correctly. 2. Check the following Fan lock signals.  Check if the voltage between Pin 2 and Pin 3 of IC2902, IC2903, and IC2904 on the LCD Drive C.B.A. is approx. +9V. NO Check the Power C.B.A. (+9V line) (Refer to "CHECKING THE POWER C.B.A.") YES Check if the voltage between Pin 1 and Pin 2 of P2902, P2903, and P2904 on the LCD Drive C.B.A. is approx. +7V~ +8V (FAN Input Voltage). YES Check if the voltage at Pin 3 of P2902 on the LCD Drive C.B.A. is approx. 0 V. (Pin 3: FAN 1 lock (H)) YES NO Replace Fan Case Unit (including FAN1). NO Check if the voltage between Pin 1 and Pin 3 of IC2902, IC2903, and IC2904 on the LCD Drive C.B.A. is more than +3.3V. (FAN ON (H)) YES Check if the voltage at Pin 3 of P2903 on the LCD Drive C.B.A. is approx. 0 V. (Pin 3: FAN 2 lock (H)) YES NO NO Replace FAN 2. Check if the voltage between Pin 5 and Pin 3 of IC2902, IC2903, and IC2904 on the LCD Drive C.B.A. is approx. +0.8V~+2.6V (FAN Speed Control). YES Check if the voltage at Pin 3 of P2904 on the LCD Drive C.B.A. is approx. 0 V. (Pin 3: FAN 3 lock (H)) NO YES Replace IC2902, IC2903, or IC2904. NO Replace FAN 3. Check if the voltage at Pin 42 of IC2303 on the LCD Drive C.B.A. is approx. +3.3V. NO Check if the voltage at Pin 6 and 7 of IC2303 on the LCD Drive C.B.A. is approx. +3.3V. YES YES NO Check the signal line between Pin 1 of IC2902 (IC2903, IC2904) and Pin 42 of IC2303 on the LCD Drive C.B.A. Repair if necessary. Check the surrounding parts of IC2303 on the LCD Drive C.B.A. Repair if necessary. Still NG Replace IC2303. Check the Base C.B.A. (+3.3V line) (Refer to "CHECKING THE TV UNIT") Check if the voltage at Pin 23, 52, 63 of IC2303 on the LCD Drive C.B.A. is High (approx. +3.3V). NO Check if the voltage at Pin 29, 30, 31 of IC2303 on the LCD Drive C.B.A. is approx. 0V. (FAN1, 2, 3 lock (H)) NO YES YES Check the signal lines between Pin 5 of IC2902 (IC2903, IC2904) and Pin 23, 52, 63 of IC2303 on the LCD Drive C.B.A. Repair if necessary. Check IC2303 and the surrounding parts on the LCD Drive C.B.A. Repair if necessary. Check the signal line between Pin 3 of P2902 (P2903, P2904) and Pin 29, 30, 31 of IC2303 on the LCD Drive C.B.A. Repair if necessary.

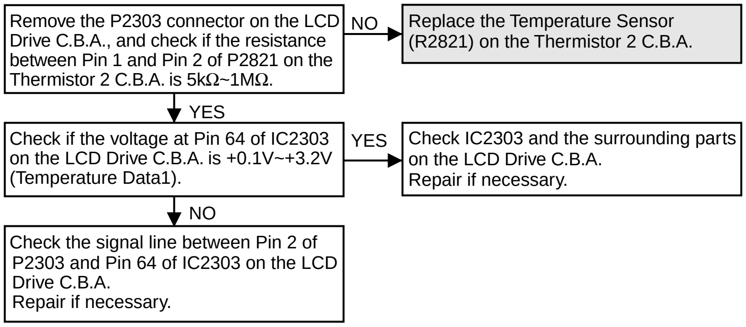
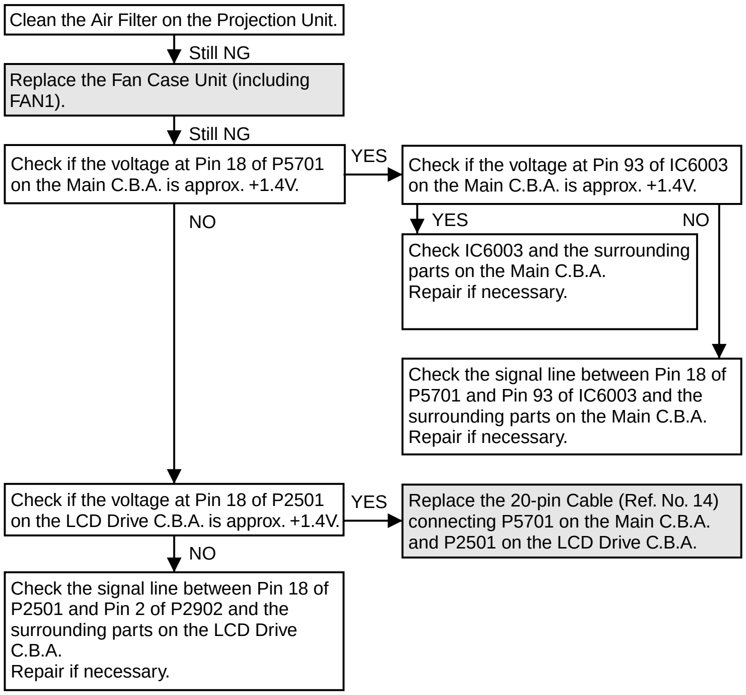
How to solve the problem indicated by the Error Indication of LED

Error No.	Problem	Possible Solution
2)	Mis-installed Lamp Cover (the Lamp Cover is open).	 Tighten the screw of the Lamp Cover Unit. Still NG Check if the voltage at Pin 19 of IC6003 on the Main C.B.A. is approx. 0V. (Lamp Cover Open (H)) YES Replace IC6003. NO Check if the voltage at Pin 16 of P5701 on the Main C.B.A. is approx. 0V. YES Check the signal line between Pin 19 of IC6003 and Pin 16 of P5701 and the surrounding parts on the Main C.B.A. Repair if necessary. NO Check if the voltage at Pin 16 of P2501 on the LCD Drive C.B.A. is approx. 0V. YES Replace the 20-pin Cable (Ref. No. 14) between P5701 on the Main C.B.A. and P2501 on the LCD Drive C.B.A. NO Replace the Cover SW (SW2911) on the Cover Switch C.B.A. Still NG Check the signal line between Pin 16 of P2501 and Pin 1 of P2502 on the LCD Drive C.B.A. Repair if necessary.
3)	The Temperature Sensor (R2811) on the Thermistor 1 C.B.A. on Fan 1 is shorted or open.	1. Confirm that all connector cables are connected to the connectors correctly. 2. Check the following Temperature data lines.  Remove P2302 connector on the LCD Drive C.B.A. and check if the resistance between Pin 1 and Pin 2 of P2811 on the Thermistor 1 C.B.A. is 5kΩ~200kΩ. NO Replace the Temperature Sensor (R2811) on the Thermistor 1 C.B.A. YES Check if the voltage at Pin 2 of IC2303 on the LCD Drive C.B.A. is +0.1V~+3.2V (Temperature Data3). YES Check IC2303 and the surrounding parts on the LCD Drive C.B.A. Repair if necessary. NO Check the signal line between Pin 2 of P2302 and Pin 2 of IC2303 on the LCD Drive C.B.A. Repair if necessary.
4)	When the temperature detected by the Temperature Sensor (R2811) on Thermistor 1 C.B.A. exceeds 55°C (131°F), it will be indicated by LED. 1. The surrounding temperature of the place of use may be too high. 2. The vents on the rear may be blocked.	1. Relocate the unit to a proper location. • Do not place in direct sunlight or other sources of direct heat. • Do not place the unit in humid or dusty locations, or areas exposed to smoke or steam. (Surrounding temperature should be between 0°C (32°F) and 40°C (104°F) and humidity should be between 20 % and 80 % with no condensation.) • Ensure that the vents are not blocked. It is recommended that a gap of at least 10 cm be left all around the unit even when it is placed inside a cabinet or between shelves. 2. Check if the fans are operating properly.
5)	1. The Lamp does not cool off. 2. Thermal Fuse Unit (115°C (239 °F)) is defective (open). 3. The Lamp is defective (cracked). 4. The Lamp voltage becomes more than 130V or less than 30V. 5. The Ballast C.B.A. is defective. 6. The Main C.B.A. is defective.	1. Confirm that the Thermal Fuse Unit (115 °C(239 °F)) on the Lamp House is not open. 2. Wait until the Lamp cools off and try to turn the power back on. If same error LED indication continues, remove the Lamp and visually inspect it. If it is cracked, it must be replaced. If the Lamp is not cracked, check the Ballast C.B.A. (Refer to "CHECKING THE BALLAST C.B.A.") 3. If still NG, replace the Main C.B.A.
6)	Lamp voltage is not correct due to short of the Lamp.	1. Wait until the Lamp cools off. 2. Replace the Lamp.
7)	Thermal fuse (F1302) on the Ballast C.B.A. is open due to abnormal temperature rise over 117 °C (243 °F).	Check the Ballast C.B.A. (Refer to "CHECKING THE BALLAST C.B.A.")
8)	The Ballast C.B.A. is defective.	If the Lamp does not light up after 2 or 3 attemps to turn on the power, check the Ballast C.B.A. (Refer to "CHECKING THE BALLAST C.B.A.")

How to solve the problem indicated by the Error Indication of LED

Error No.	Problem	Possible Solution
9)	1. Low voltage on +17V line for the LCD Drive C.B.A. 2. Low voltage on +9V line for the LCD Drive C.B.A. 3. Low voltage on +5V line for the LCD Drive C.B.A.	1. Low voltage on +17V line for the LCD Drive C.B.A.  Is the voltage at Pin 1 of P2901 on the LCD Drive C.B.A. approx. +17V? YES Check if the voltage at Pin 60 of IC2303 on the LCD Drive C.B.A. is +12V more over. NO YES Check the surrounding parts at Pin 60 of IC2303 on the LCD Drive C.B.A. Repair if necessary. Replace IC2303 on the LCD Drive C.B.A. NO Check if there is a voltage of approx. +17V at Pin 1 of P2901 on the LCD Drive C.B.A. for a moment just after the power is turned on. YES NO Disconnect connector cable from P2901 on the LCD Drive C.B.A. and check the resistance between Pin 1 and Pin 8 of P1102 on the Base C.B.A. NO Short-circuit Check +17V line on the LCD Drive C.B.A. Repair if necessary. short-circuit Remove the Power C.B.A. from the Base C.B.A. and check the resistance between Pin 18 and Pin 30 of P1006 on the Power C.B.A. NO Short-circuit Check +17V voltage line on the Base C.B.A. Repair if necessary. short-circuit Check +17V voltage line on the Power C.B.A. Repair if necessary. (Refer to "CHECKING THE POWER C.B.A.") 2. Low voltage on +9V line for the LCD Drive C.B.A.  Is the voltage at Pin 2 of P2901 on the LCD Drive C.B.A. approx. +17V? YES Check if the voltage at Pin 59 of IC2303 on the LCD Drive C.B.A. is +8V more over. NO YES Check the surrounding parts at Pin 59 of IC2303 on the LCD Drive C.B.A. Repair if necessary. Replace IC2303 on the LCD Drive C.B.A. NO Check if there is a voltage of approx. +11V at Pin 2 of P2901 on the LCD Drive C.B.A. for a moment just after the power is turned on. YES NO Disconnect connector cable from P2901 on the LCD Drive C.B.A. and check the resistance between Pin 2 and Pin 8 of P1102 on the Base C.B.A. NO Short-circuit Check +11V line on the LCD Drive C.B.A. Repair if necessary. short-circuit Remove the Power C.B.A. from the Base C.B.A. and check the resistance between Pin 20 and Pin 30 of P1006 on the Power C.B.A. NO Short-circuit Check +11V voltage line on the Base C.B.A. Repair if necessary. short-circuit Check +11V voltage line on the Power C.B.A. Repair if necessary. (Refer to "CHECKING THE POWER C.B.A.") 3. Low voltage on +5V line for the LCD Drive C.B.A.  Is the voltage at Pin 3 of P2901 on the LCD Drive C.B.A. approx. +5V? YES Check if the voltage at Pin 4 of IC2303 on the LCD Drive C.B.A. is +2.5V more over. NO YES Check the surrounding parts at Pin 4 of IC2303 on the LCD Drive C.B.A. Repair if necessary. Replace IC2303 on the LCD Drive C.B.A. NO Check if there is a voltage of approx. +5V at Pin 3 of P2901 on the LCD Drive C.B.A. for a moment just after the power is turned on. YES NO Check +5V voltage line on the Base C.B.A.Repair if necessary. (Refer to "CHECKING THE TV UNIT")

How to solve the problem indicated by the Error Indication of LED

Error No.	Problem	Possible Solution
10)	The Temperature Sensor (R2821) on the Thermistor 2 C.B.A. on the Lamp House is shorted or open.	1. Confirm that all connector cables are connected to the connectors correctly. 2. Check the following Temperature data lines.  Remove the P2303 connector on the LCD Drive C.B.A., and check if the resistance between Pin 1 and Pin 2 of P2821 on the Thermistor 2 C.B.A. is 5kΩ~1MΩ. NO Replace the Temperature Sensor (R2821) on the Thermistor 2 C.B.A. YES Check if the voltage at Pin 64 of IC2303 on the LCD Drive C.B.A. is +0.1V~+3.2V (Temperature Data1). YES Check IC2303 and the surrounding parts on the LCD Drive C.B.A. Repair if necessary. NO Check the signal line between Pin 2 of P2303 and Pin 64 of IC2303 on the LCD Drive C.B.A. Repair if necessary.
11)	When the temperature detected by the Temperature Sensor (R2821) on Thermistor 2 C.B.A. exceeds 105 °C (221 °F), it will be indicated by LED. 1. The surrounding temperature of the place of use may be too high. 2. The vents on the rear may be blocked.	1. Relocate the unit to a proper location. • Do not place in direct sunlight and other sources of direct heat. • Do not place the unit in humid or dusty locations, or areas exposed to smoke or steam. (Surrounding temperature should be between 0 °C (32 °F) and 40 °C (104 °F) and humidity should be between 20 % and 80 % with no condensation.) • Ensure that the vents are not blocked. It is recommended that a gap of at least 10 cm be left all around the unit even when it is placed inside a cabinet or between shelves. 2. Check if the fans are operating properly.
12)	Clogged Air Filter.	 Clean the Air Filter on the Projection Unit. Still NG Replace the Fan Case Unit (including FAN1). Still NG Check if the voltage at Pin 18 of P5701 on the Main C.B.A. is approx. +1.4V. YES Check if the voltage at Pin 93 of IC6003 on the Main C.B.A. is approx. +1.4V. YES Check IC6003 and the surrounding parts on the Main C.B.A. Repair if necessary. NO Check the signal line between Pin 18 of P5701 and Pin 93 of IC6003 and the surrounding parts on the Main C.B.A. Repair if necessary. NO Check if the voltage at Pin 18 of P2501 on the LCD Drive C.B.A. is approx. +1.4V. YES Replace the 20-pin Cable (Ref. No. 14) connecting P5701 on the Main C.B.A. and P2501 on the LCD Drive C.B.A. NO Check the signal line between Pin 18 of P2501 and Pin 2 of P2902 and the surrounding parts on the LCD Drive C.B.A. Repair if necessary.

LAMP DOES NOT LIGHT UP

Note: :

1. **Before doing this troubleshooting, confirm that all connector cables in the unit are connected to the connectors correctly.**
2. **When doing troubleshooting over again, be sure to turn the power off and unplug the AC Cord.**

Plug in the AC Cord.

Does the Power LED (D6701) on the Operation C.B.A. light up red?

- NO: The Power C.B.A. is defective. (Refer to "**CHECKING THE POWER C.B.A.**")
- YES: Turn the power ON.

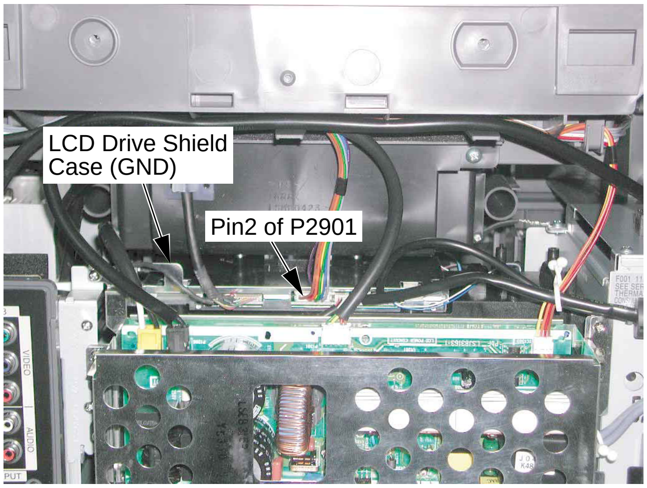
Is there a snap sound of the Relay turning ON? (Relay: RL801 on the Power C.B.A.)

- NO: The Power C.B.A. is defective. (Refer to "**CHECKING THE POWER C.B.A.**")
- YES: Does the Power LED (D6701) on the Operation C.B.A. flash green?

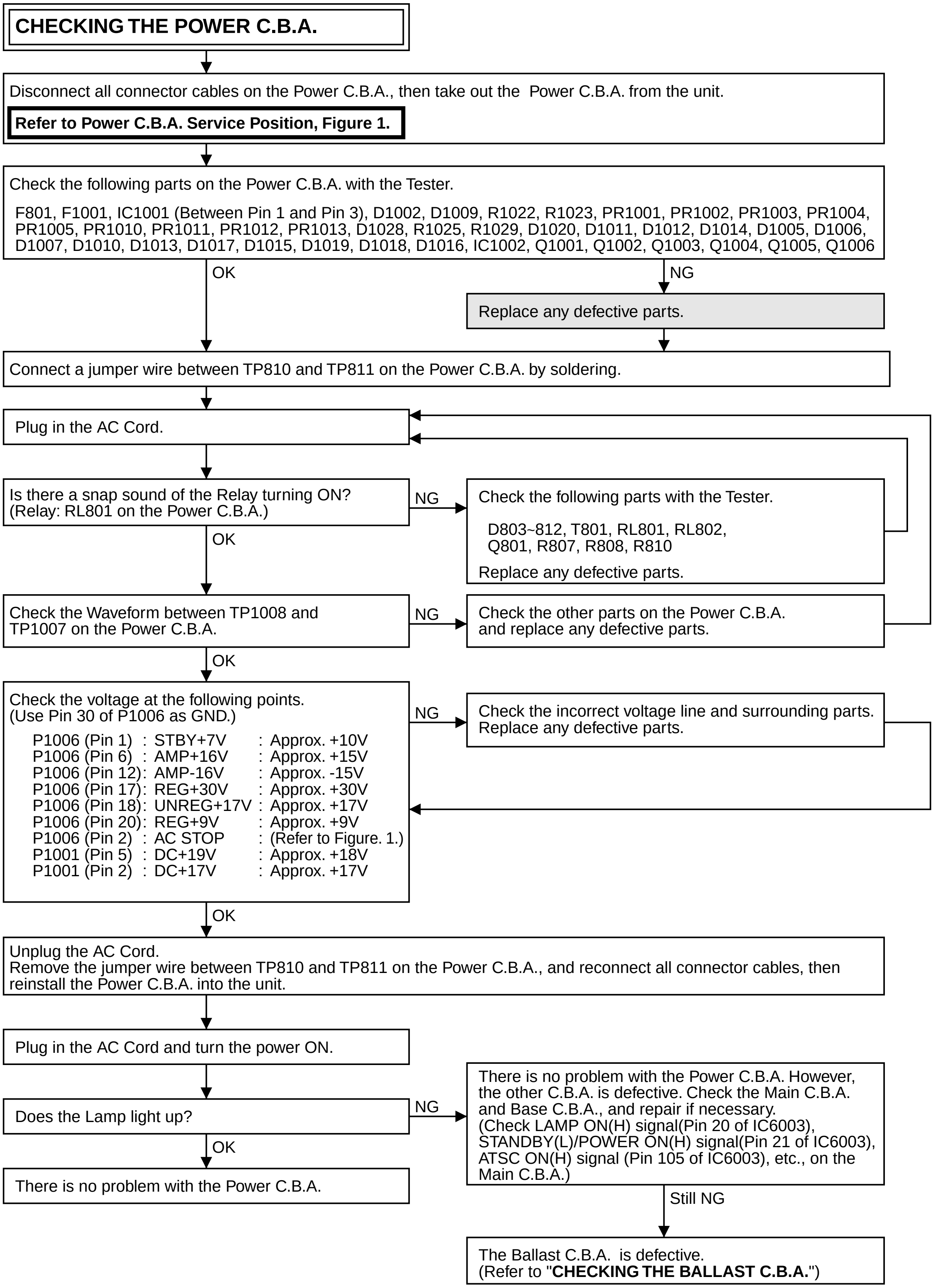
Does the Power LED (D6701) on the Operation C.B.A. flash green?

- NO: The Power C.B.A. is defective. (Refer to "**CHECKING THE POWER C.B.A.**")
- YES:
  - Error 1), 2), 3), 4), 9), 10), 11), or 12) occurs. (Refer to "**ERROR INDICATION INFORMATION"**)
    - Refer to "**How to solve the problem indicated by the Error Indication of LED.**" Perform troubleshooting.
  - Error 5), 6), 7), or 8) occurs. (Refer to "**ERROR INDICATION INFORMATION"**) **<<Ballast Error>>**
    - The Ballast C.B.A. is defective. (Refer to "**CHECKING THE BALLAST C.B.A.**")
  - The Power LED (D6701) goes off after a few seconds.
    - Unplug the AC Cord, and plug in AC Cord again. Then turn the power ON.
    - Check if there is a voltage of approx. +9V at Pin 2 of P2901 on the LCD Drive C.B.A. for a moment just after the power is turned on. Refer to figure at left.
      - NO: The Power C.B.A. is defective. (Refer to **"CHECKING THE POWER C.B.A."**)
      - YES: The TV Unit is defective. (Refer to **"CHECKING THE TV UNIT."**)
  - The Power LED (D6701) lights up green but Lamp does not light up. Or, the Power LED (D6701) flashes green for approx. 150 seconds. Then the Power LED lights up red.
    - Check that none of the following connector cables is disconnected:
      - Lamp connector
      - 5 pin connector cable (between P1007 on the Power C.B.A. and P1301 on the Ballast C.B.A.)
      - Thurmal Fuse Unit on the Lamp house unit

      If NG, connect the connector cable firmly.
    - The Ballast C.B.A. is defective. (Refer to "**CHECKING THE BALLAST C.B.A.**")



CHECKING THE POWER C.B.A.



Disconnect all connector cables on the Power C.B.A., then take out the Power C.B.A. from the unit.

Refer to Power C.B.A. Service Position, Figure 1.

Check the following parts on the Power C.B.A. with the Tester.

F801, F1001, IC1001 (Between Pin 1 and Pin 3), D1002, D1009, R1022, R1023, PR1001, PR1002, PR1003, PR1004, PR1005, PR1010, PR1011, PR1012, PR1013, D1028, R1025, R1029, D1020, D1011, D1012, D1014, D1005, D1006, D1007, D1010, D1013, D1017, D1015, D1019, D1018, D1016, IC1002, Q1001, Q1002, Q1003, Q1004, Q1005, Q1006

Replace any defective parts.

Connect a jumper wire between TP810 and TP811 on the Power C.B.A. by soldering.

Plug in the AC Cord.

Is there a snap sound of the Relay turning ON?
(Relay: RL801 on the Power C.B.A.)

Check the following parts with the Tester.

D803~812, T801, RL801, RL802,
Q801, R807, R808, R810

Replace any defective parts.

Check the Waveform between TP1008 and TP1007 on the Power C.B.A.

Check the other parts on the Power C.B.A. and replace any defective parts.

Check the voltage at the following points.
(Use Pin 30 of P1006 as GND.)

P1006 (Pin 1) : STBY+7V : Approx. +10V
P1006 (Pin 6) : AMP+16V : Approx. +15V
P1006 (Pin 12): AMP-16V : Approx. -15V
P1006 (Pin 17): REG+30V : Approx. +30V
P1006 (Pin 18): UNREG+17V : Approx. +17V
P1006 (Pin 20): REG+9V : Approx. +9V
P1006 (Pin 2) : AC STOP : (Refer to Figure. 1.)
P1001 (Pin 5) : DC+19V : Approx. +18V
P1001 (Pin 2) : DC+17V : Approx. +17V

Check the incorrect voltage line and surrounding parts.
Replace any defective parts.

Unplug the AC Cord.
Remove the jumper wire between TP810 and TP811 on the Power C.B.A., and reconnect all connector cables, then reinstall the Power C.B.A. into the unit.

Plug in the AC Cord and turn the power ON.

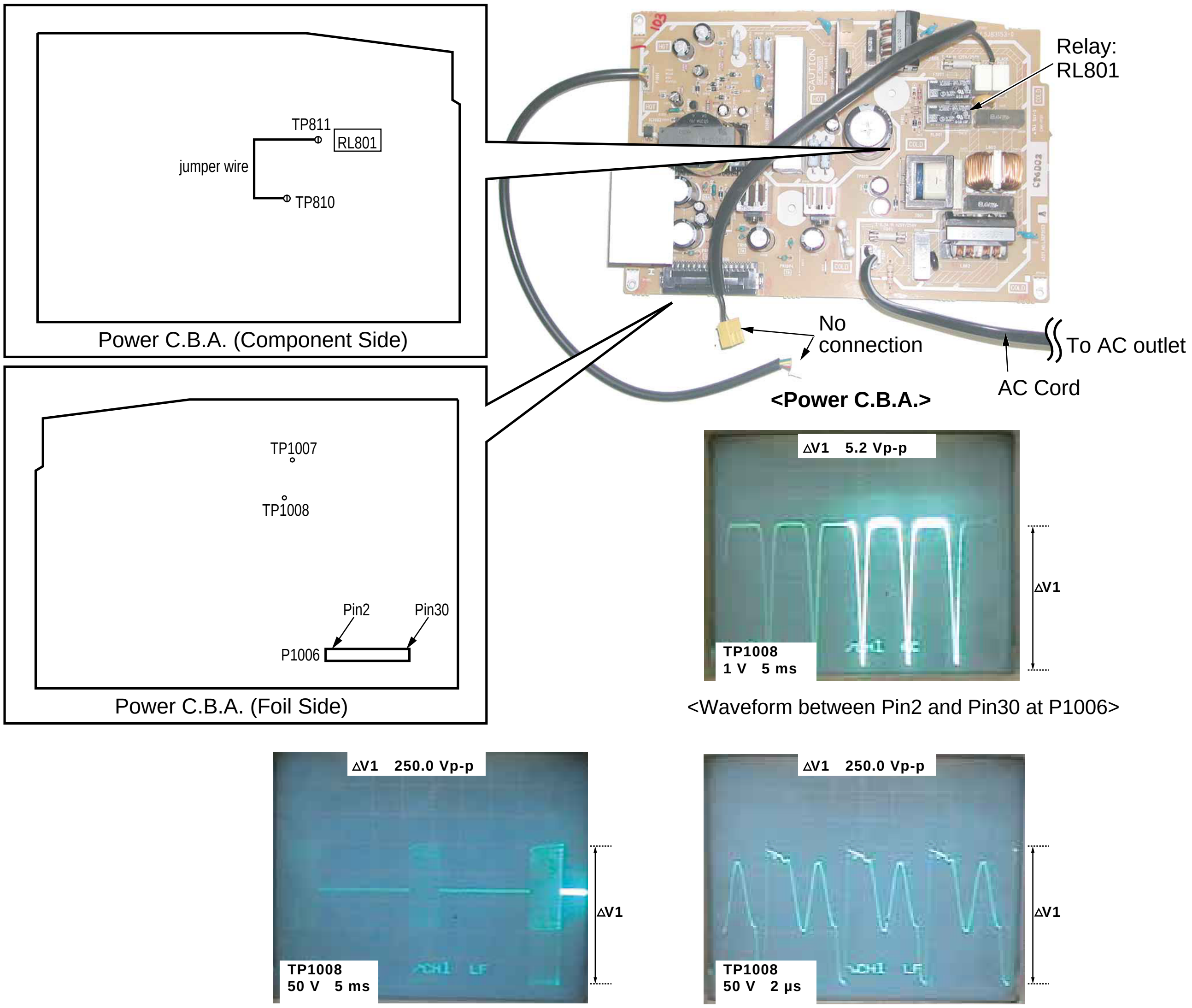
Does the Lamp light up?

There is no problem with the Power C.B.A. However, the other C.B.A. is defective. Check the Main C.B.A. and Base C.B.A., and repair if necessary.
(Check LAMP ON(H) signal(Pin 20 of IC6003), STANDBY(L)/POWER ON(H) signal(Pin 21 of IC6003), ATSC ON(H) signal (Pin 105 of IC6003), etc., on the Main C.B.A.)

The Ballast C.B.A. is defective.
(Refer to "**CHECKING THE BALLAST C.B.A.**")

There is no problem with the Power C.B.A.

Power C.B.A. Service Position


TP811
RL801
jumper wire
TP810
Relay:
RL801
No connection
To AC outlet
AC Cord
TP1007
TP1008
Pin2
Pin30
P1006
ΔV1 5.2 Vp-p
ΔV1
TP1008
1 V 5 ms
ΔV1 250.0 Vp-p
ΔV1
TP1008
50 V 5 ms
ΔV1 250.0 Vp-p
ΔV1
TP1008
50 V 2 µs

Power C.B.A. (Component Side)

Power C.B.A. (Foil Side)

<Power C.B.A.>

<Waveform between Pin2 and Pin30 at P1006>

<Waveform between TP1007 and TP1008>

<Waveform between TP1007 and TP1008>

Figure. 1

Resistance for Power Line of Power C.B.A.

Power Line	Check Point	Resistance
REG 30V	TP1001	More than 50 ohms
STBY 7V	TP803	More than 50 ohms
REG 9V	TP1012	More than 50 ohms
UNREG 17V	TP1002	More than 50 ohms
AMP +16V	TP1009	More than 50 ohms
AMP -16V	TP1011	More than 50 ohms

Note: When measuring the resistance of above points on Power C.B.A.:

1. Turn off the unit and unplug the AC Cord.
2. Disconnect all connector cables of Power C.B.A.
3. Use TP1010 as a Ground.

CHECKING THE BALLAST C.B.A.

Note:
When servicing the Ballast C.B.A., do not turn the Variable resistor (R1321) on the Ballast C.B.A.

Check the resistance of the Thermal Fuse Unit (F001) on the Lamp House.

NG → Replace the Thermal Fuse Unit (F001).

OK

Ensure there is no crack on the bulb of the Lamp.

NG → Replace the Lamp.

OK

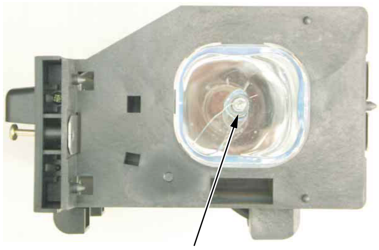
Wait for at least 5 minutes after disconnecting AC plug.

Disconnect all connector cables on the Ballast C.B.A., then take out the Ballast C.B.A.

CAUTION:
Do not remove the Shield Case of the Ballast C.B.A. for at least 5 minutes after disconnecting AC plug to reduce the risk of electric shock.

Remove the Shield Case (the Ballast Shield Case Top, and the Ballast Shield Case Bottom) of the Ballast C.B.A.

Refer to Figure 2.



Check if the voltage is 0 V between TP1301(+) and TP1302(-).

NG → Discharge TP1301(+) and TP1302(-) at a resistance of approx. 100Ω/5 W for about 3 seconds.

OK

Check the following parts on the Ballast P.C.B. with the Tester.

F1301, F1302 (Thermal Fuse), D1302, D1308, Q1304, Q1306, Q1307, Q1308, Q1309, Q1310, D1305, D1311, D1313, D1318, D1303, D1304, D1315, D1309, D1310, Q1301, Q1302, Q1305, IC1303, IC1304, IC1302

CAUTION:
Do not touch any parts for at least 5 minutes after disconnecting AC plug to reduce the risk of electric shock.
Before checking parts, confirm that the voltage between TP1301 and TP1302 is 0 V.
If not, discharge TP1301 and TP1302 at a resistance of approx. 100 Ω/5 W for about 3 seconds.

OK

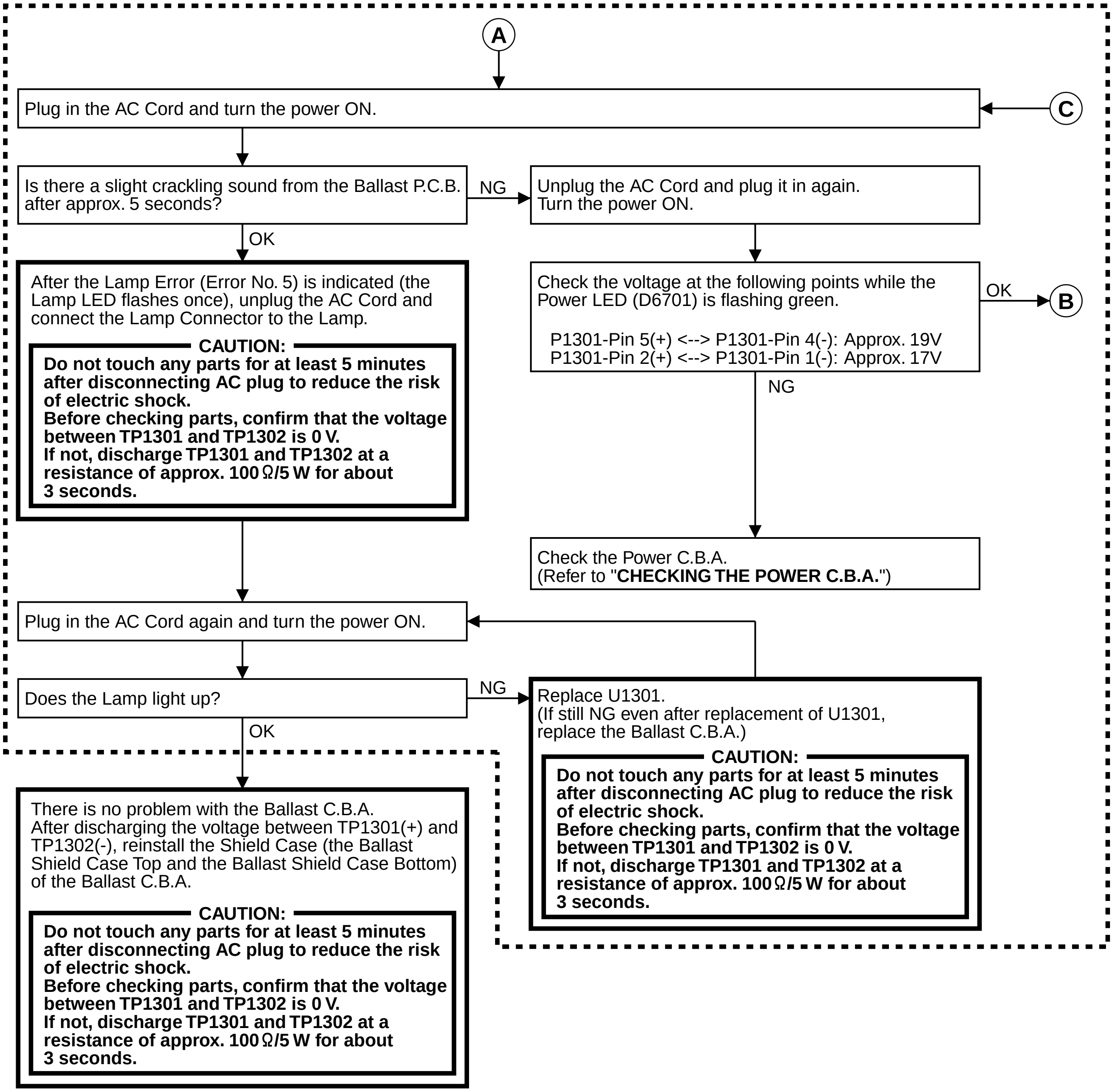
NG → Replace any defective parts.

Reconnect all connector cable on the Ballast P.C.B. except the Lamp Connector.

Refer to Ballast C.B.A. Service Position, Figure 3.

A

Ballast C.B.A. Service Position



Plug in the AC Cord and turn the power ON.

Is there a slight crackling sound from the Ballast P.C.B. after approx. 5 seconds?

Unplug the AC Cord and plug it in again. Turn the power ON.

Check the voltage at the following points while the Power LED (D6701) is flashing green.

P1301-Pin 5(+) <--> P1301-Pin 4(-): Approx. 19V
P1301-Pin 2(+) <--> P1301-Pin 1(-): Approx. 17V

Check the Power C.B.A.
(Refer to "**CHECKING THE POWER C.B.A.**")

After the Lamp Error (Error No. 5) is indicated (the Lamp LED flashes once), unplug the AC Cord and connect the Lamp Connector to the Lamp.

CAUTION:
Do not touch any parts for at least 5 minutes after disconnecting AC plug to reduce the risk of electric shock.
Before checking parts, confirm that the voltage between TP1301 and TP1302 is 0 V.
If not, discharge TP1301 and TP1302 at a resistance of approx. 100 Ω/5 W for about 3 seconds.

Plug in the AC Cord again and turn the power ON.

Does the Lamp light up?

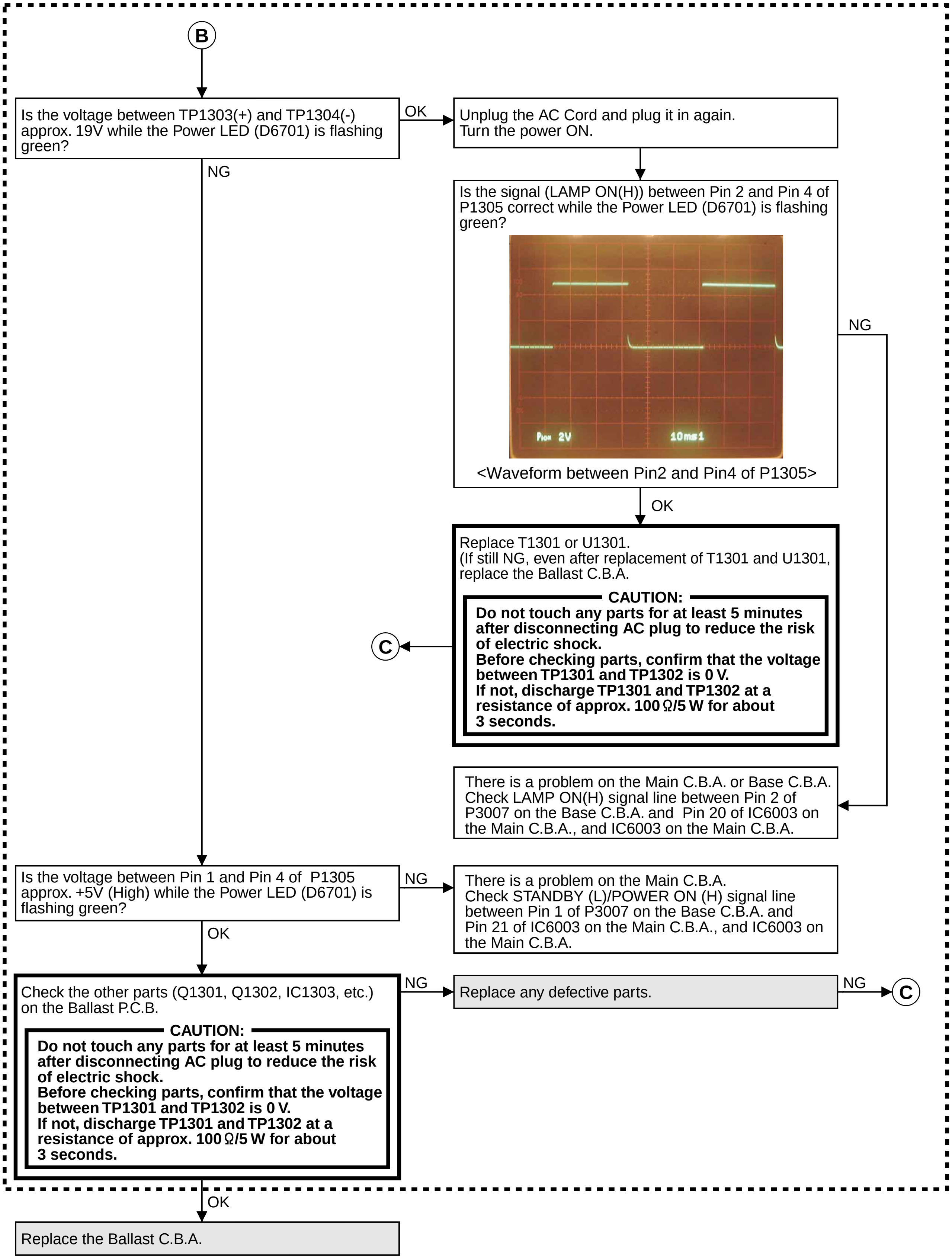
Replace U1301.
(If still NG even after replacement of U1301, replace the Ballast C.B.A.)

CAUTION:
Do not touch any parts for at least 5 minutes after disconnecting AC plug to reduce the risk of electric shock.
Before checking parts, confirm that the voltage between TP1301 and TP1302 is 0 V.
If not, discharge TP1301 and TP1302 at a resistance of approx. 100 Ω/5 W for about 3 seconds.

There is no problem with the Ballast C.B.A.
After discharging the voltage between TP1301(+) and TP1302(-), reinstall the Shield Case (the Ballast Shield Case Top and the Ballast Shield Case Bottom) of the Ballast C.B.A.

CAUTION:
Do not touch any parts for at least 5 minutes after disconnecting AC plug to reduce the risk of electric shock.
Before checking parts, confirm that the voltage between TP1301 and TP1302 is 0 V.
If not, discharge TP1301 and TP1302 at a resistance of approx. 100 Ω/5 W for about 3 seconds.

Ballast C.B.A. Service Position



Is the voltage between TP1303(+) and TP1304(-) approx. 19V while the Power LED (D6701) is flashing green?

Unplug the AC Cord and plug it in again.
Turn the power ON.

Is the signal (LAMP ON(H)) between Pin 2 and Pin 4 of P1305 correct while the Power LED (D6701) is flashing green?

<Waveform between Pin2 and Pin4 of P1305>

Replace T1301 or U1301.
(If still NG, even after replacement of T1301 and U1301, replace the Ballast C.B.A.

CAUTION:
Do not touch any parts for at least 5 minutes after disconnecting AC plug to reduce the risk of electric shock.
Before checking parts, confirm that the voltage between TP1301 and TP1302 is 0 V.
If not, discharge TP1301 and TP1302 at a resistance of approx. 100 Ω/5 W for about 3 seconds.

There is a problem on the Main C.B.A. or Base C.B.A.
Check LAMP ON(H) signal line between Pin 2 of P3007 on the Base C.B.A. and Pin 20 of IC6003 on the Main C.B.A., and IC6003 on the Main C.B.A.

Is the voltage between Pin 1 and Pin 4 of P1305 approx. +5V (High) while the Power LED (D6701) is flashing green?

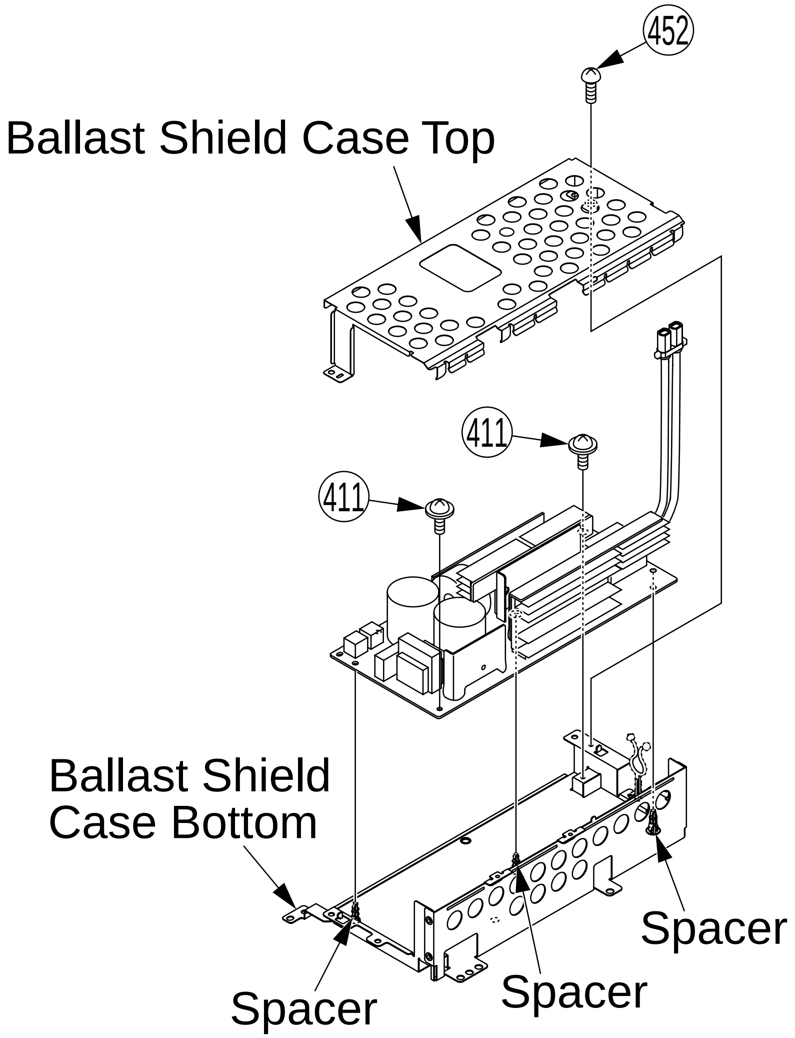
There is a problem on the Main C.B.A.
Check STANDBY (L)/POWER ON (H) signal line between Pin 1 of P3007 on the Base C.B.A. and Pin 21 of IC6003 on the Main C.B.A., and IC6003 on the Main C.B.A.

Check the other parts (Q1301, Q1302, IC1303, etc.) on the Ballast P.C.B.

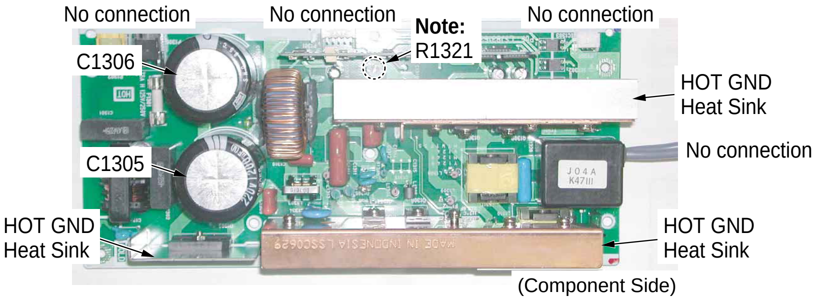
CAUTION:
Do not touch any parts for at least 5 minutes after disconnecting AC plug to reduce the risk of electric shock.
Before checking parts, confirm that the voltage between TP1301 and TP1302 is 0 V.
If not, discharge TP1301 and TP1302 at a resistance of approx. 100 Ω/5 W for about 3 seconds.

Replace any defective parts.

Replace the Ballast C.B.A.


452
Ballast Shield Case Top
411
411
Ballast Shield
Case Bottom
Spacer
Spacer
Spacer

Note:
When servicing the Ballast C.B.A., do not turn the Variable resistor (R1321) on the Ballast C.B.A.

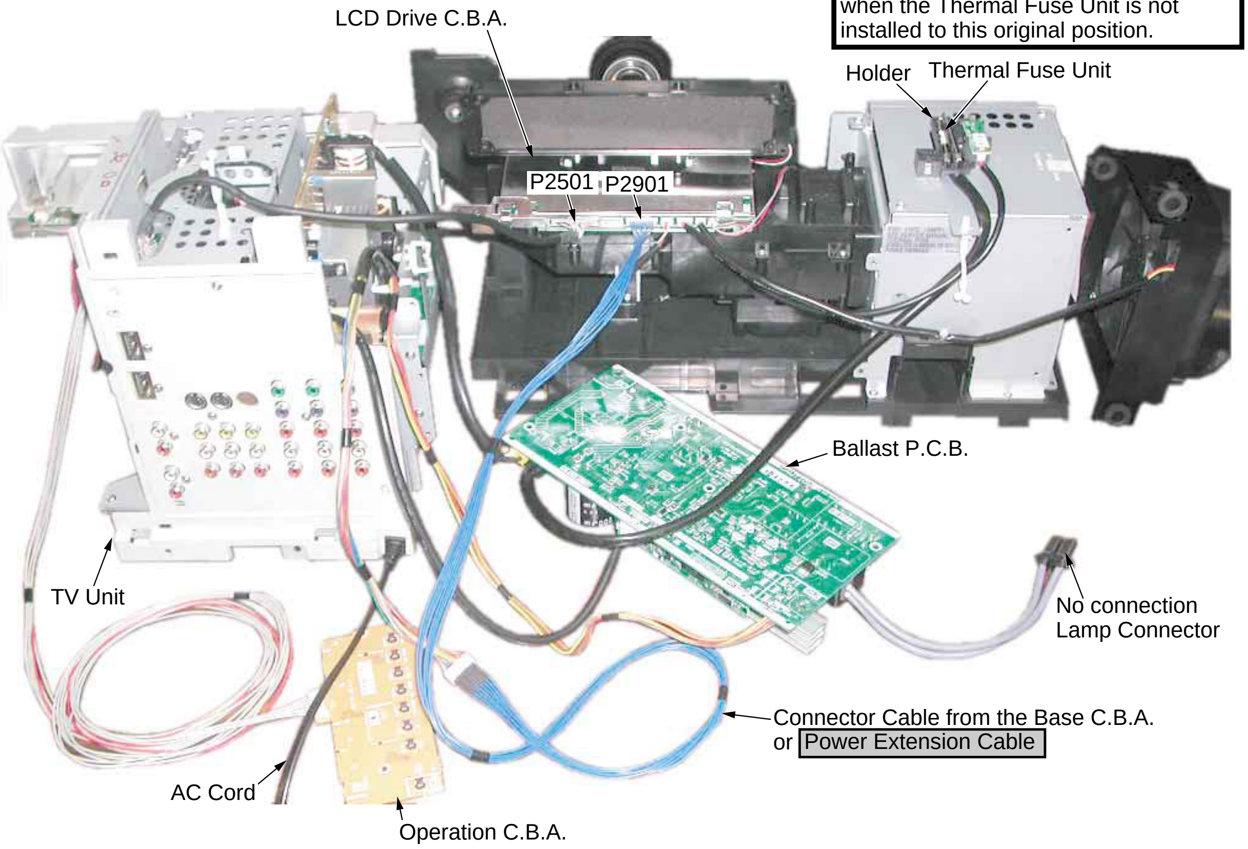

No connection
No connection
Note:
R1321
No connection
C1306
HOT GND
Heat Sink
No connection
C1305
HOT GND
Heat Sink
HOT GND
Heat Sink
(Component Side)

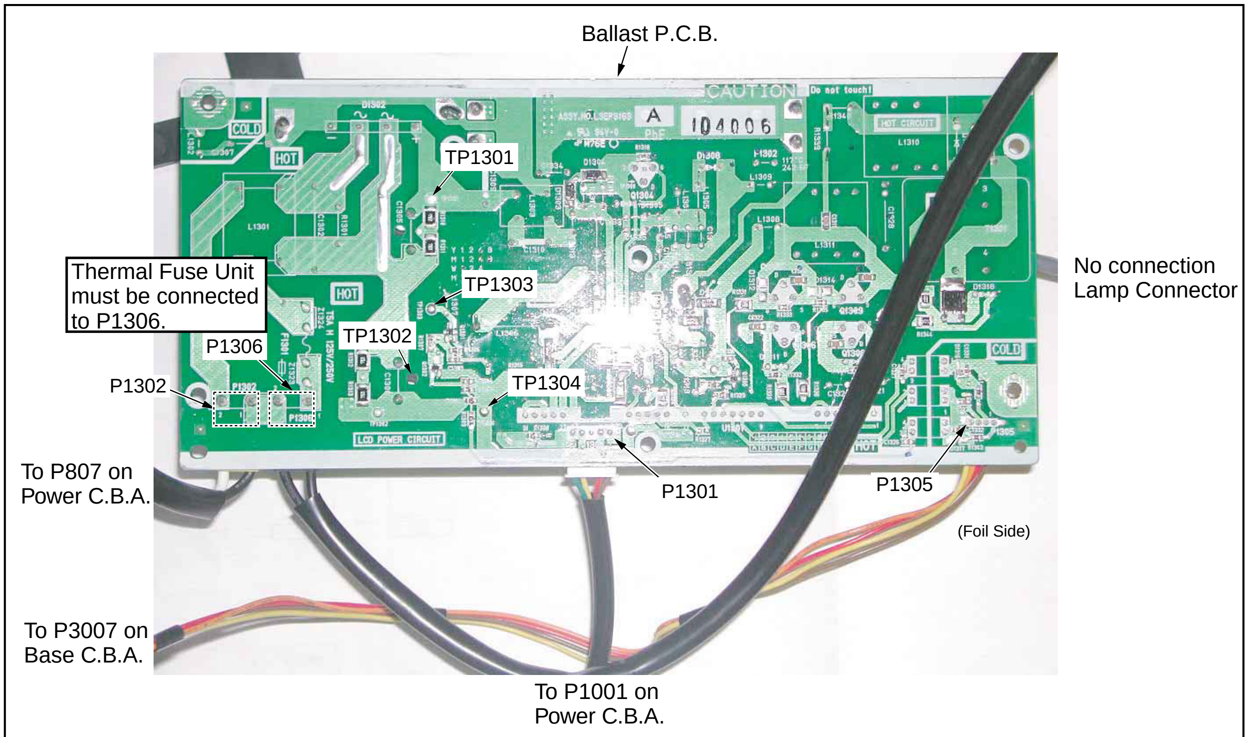
<With the the Ballast Shield Case Top and the Ballast Shield Case Bottom removed>

Figure. 2

Ballast C.B.A. Service Position

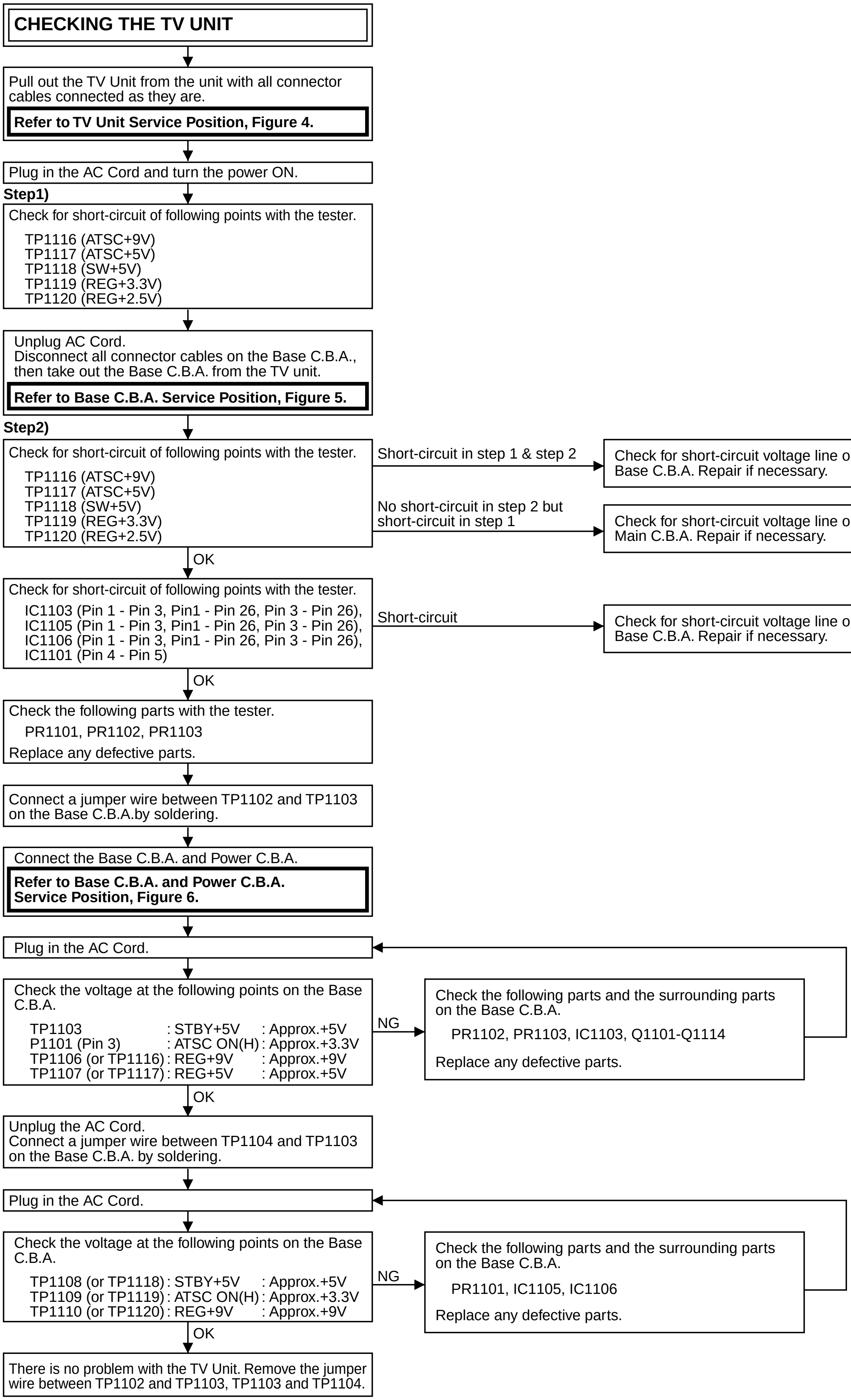
CAUTION:
Make sure that the Thermal Fuse Unit (F001) does not touch any metallic parts when the Thermal Fuse Unit is not installed to this original position.


LCD Drive C.B.A.
Holder
Thermal Fuse Unit
P2501
P2901
Ballast P.C.B.
TV Unit
No connection
Lamp Connector
Connector Cable from the Base C.B.A.
or Power Extension Cable
AC Cord
Operation C.B.A.


Ballast P.C.B.
TP1301
Thermal Fuse Unit
must be connected
to P1306.
TP1303
TP1302
P1306
TP1304
P1302
No connection
Lamp Connector
To P807 on
Power C.B.A.
P1301
P1305
(Foil Side)
To P3007 on
Base C.B.A.
To P1001 on
Power C.B.A.

<With the Ballast Shield Case Top and the Ballast Shield Case Bottom removed>

Figure. 3



CHECKING THE TV UNIT

Pull out the TV Unit from the unit with all connector cables connected as they are.

Refer to TV Unit Service Position, Figure 4.

Plug in the AC Cord and turn the power ON.

Step1)

Check for short-circuit of following points with the tester.

TP1116 (ATSC+9V)
TP1117 (ATSC+5V)
TP1118 (SW+5V)
TP1119 (REG+3.3V)
TP1120 (REG+2.5V)

Unplug AC Cord.
Disconnect all connector cables on the Base C.B.A., then take out the Base C.B.A. from the TV unit.

Refer to Base C.B.A. Service Position, Figure 5.

Step2)

Check for short-circuit of following points with the tester.

TP1116 (ATSC+9V)
TP1117 (ATSC+5V)
TP1118 (SW+5V)
TP1119 (REG+3.3V)
TP1120 (REG+2.5V)

Short-circuit in step 1 & step 2 → Check for short-circuit voltage line on the Base C.B.A. Repair if necessary.

No short-circuit in step 2 but short-circuit in step 1 → Check for short-circuit voltage line on the Main C.B.A. Repair if necessary.

OK

Check for short-circuit of following points with the tester.

IC1103 (Pin 1 - Pin 3, Pin1 - Pin 26, Pin 3 - Pin 26),
IC1105 (Pin 1 - Pin 3, Pin1 - Pin 26, Pin 3 - Pin 26),
IC1106 (Pin 1 - Pin 3, Pin1 - Pin 26, Pin 3 - Pin 26),
IC1101 (Pin 4 - Pin 5)

Short-circuit → Check for short-circuit voltage line on the Base C.B.A. Repair if necessary.

OK

Check the following parts with the tester.

PR1101, PR1102, PR1103

Replace any defective parts.

Connect a jumper wire between TP1102 and TP1103 on the Base C.B.A.by soldering.

Connect the Base C.B.A. and Power C.B.A.

Refer to Base C.B.A. and Power C.B.A. Service Position, Figure 6.

Plug in the AC Cord.

Check the voltage at the following points on the Base C.B.A.

TP1103	: STBY+5V	: Approx.+5V
P1101 (Pin 3)	: ATSC ON(H)	: Approx.+3.3V
TP1106 (or TP1116)	: REG+9V	: Approx.+9V
TP1107 (or TP1117)	: REG+5V	: Approx.+5V

NG → Check the following parts and the surrounding parts on the Base C.B.A.

PR1102, PR1103, IC1103, Q1101-Q1114

Replace any defective parts.

OK

Unplug the AC Cord.
Connect a jumper wire between TP1104 and TP1103 on the Base C.B.A. by soldering.

Plug in the AC Cord.

Check the voltage at the following points on the Base C.B.A.

TP1108 (or TP1118)	: STBY+5V	: Approx.+5V
TP1109 (or TP1119)	: ATSC ON(H)	: Approx.+3.3V
TP1110 (or TP1120)	: REG+9V	: Approx.+9V

NG → Check the following parts and the surrounding parts on the Base C.B.A.

PR1101, IC1105, IC1106

Replace any defective parts.

OK

There is no problem with the TV Unit. Remove the jumper wire between TP1102 and TP1103, TP1103 and TP1104.

TV Unit Service Position

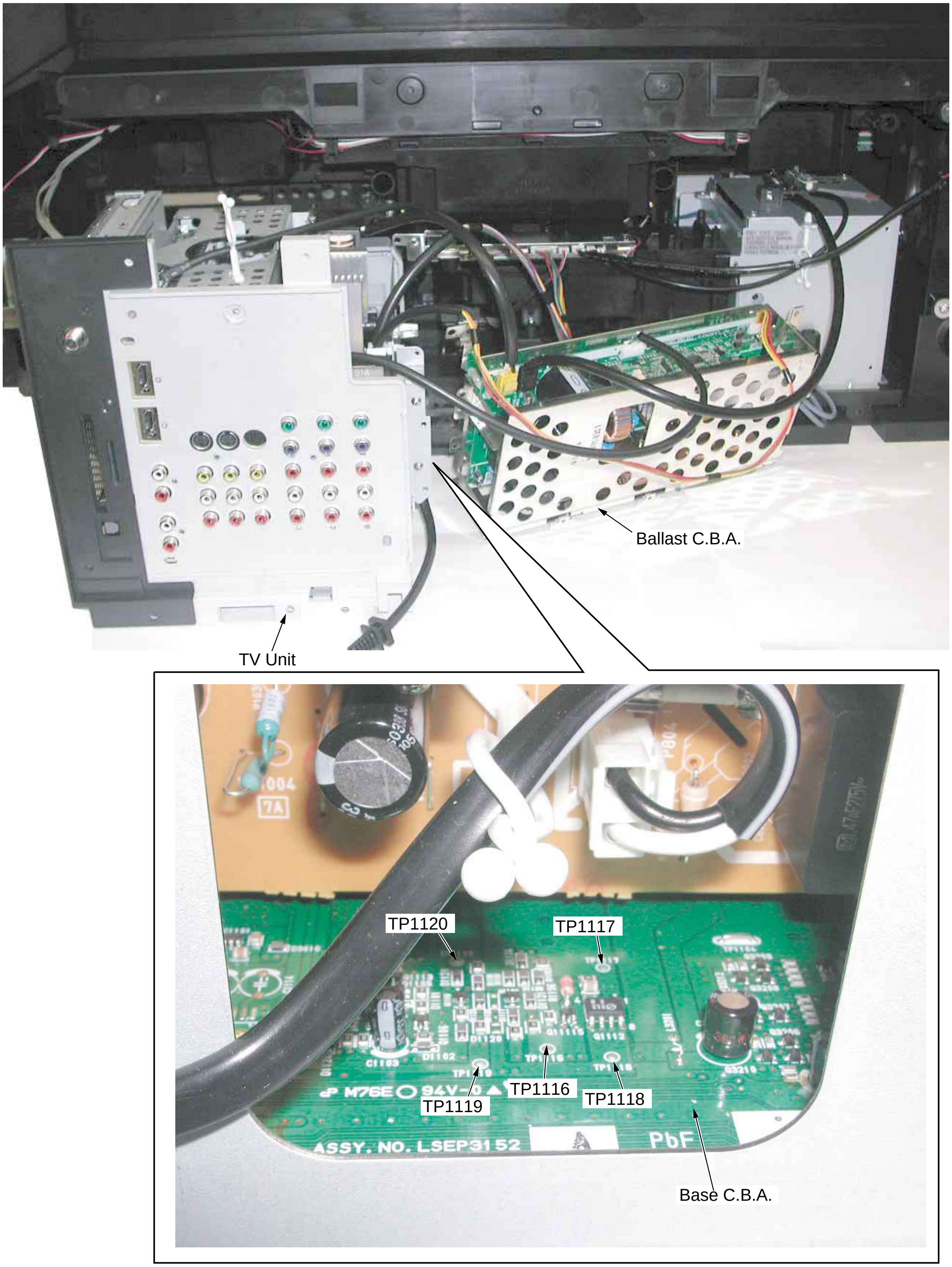

Ballast C.B.A.
TV Unit
TP1120
TP1117
TP1116
TP1119
TP1118
Base C.B.A.

Figure. 4

Base C.B.A. Service Position

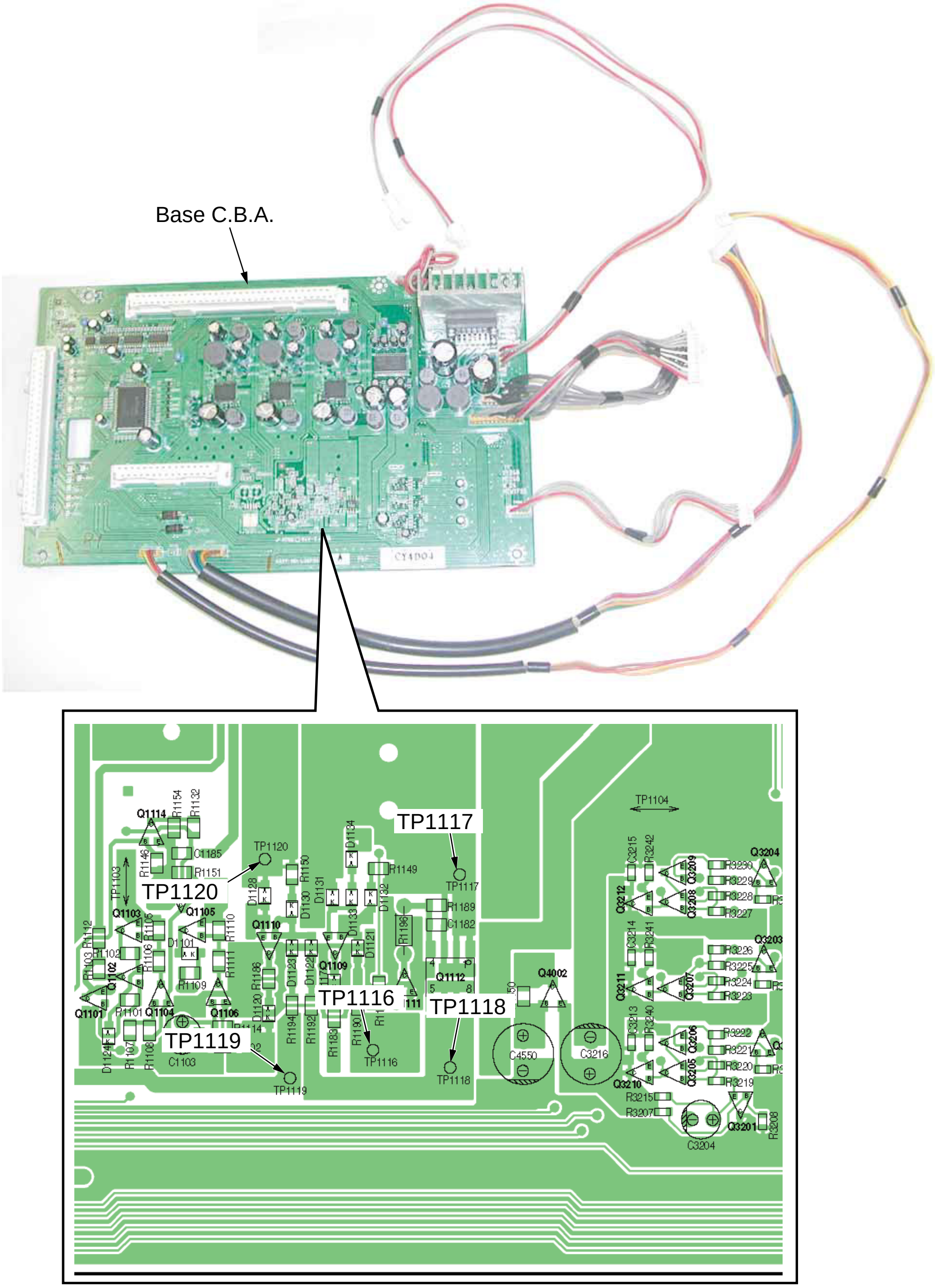
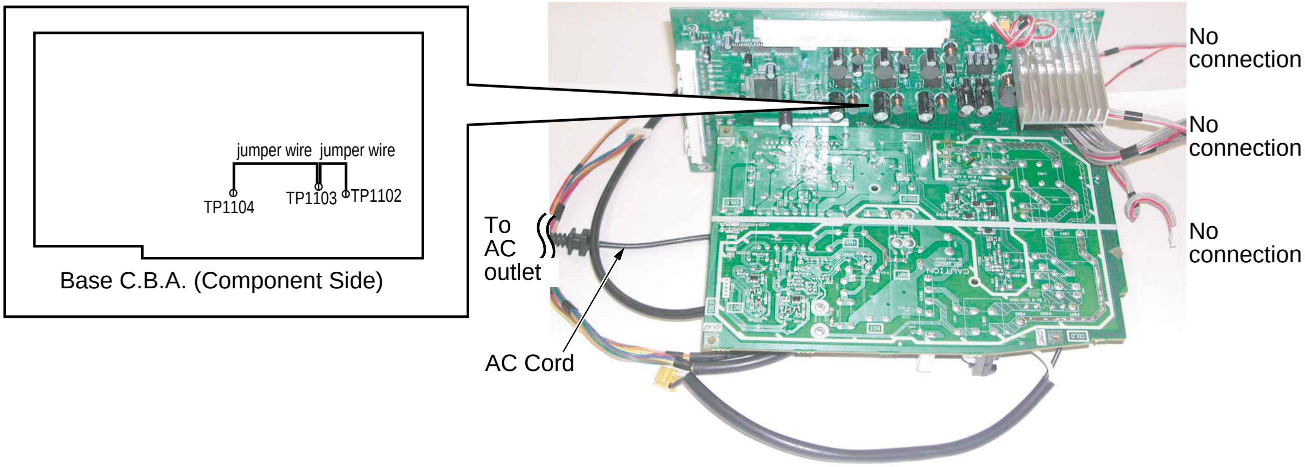

Base C.B.A.
TP1117
TP1120
TP1116
TP1118
TP1119
TP1104

Figure. 5

Base C.B.A. & Power C.B.A. Service Position

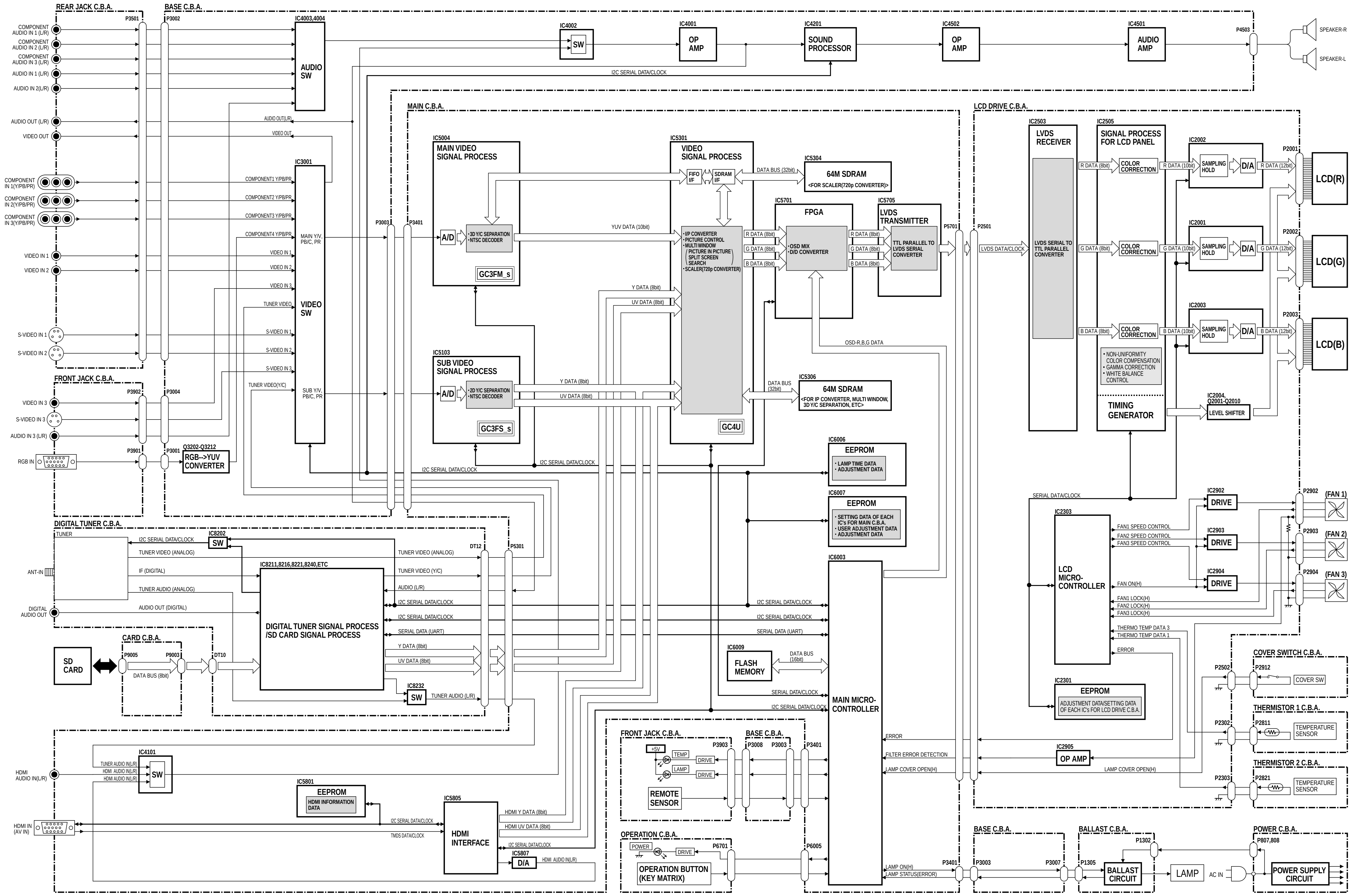

jumper wire
jumper wire
TP1104
TP1103
TP1102
Base C.B.A. (Component Side)
To AC outlet
AC Cord
No connection
No connection
No connection

<Power C.B.A. & Base C.B.A.>

Figure. 6

11 BLOCK DIAGRAMS

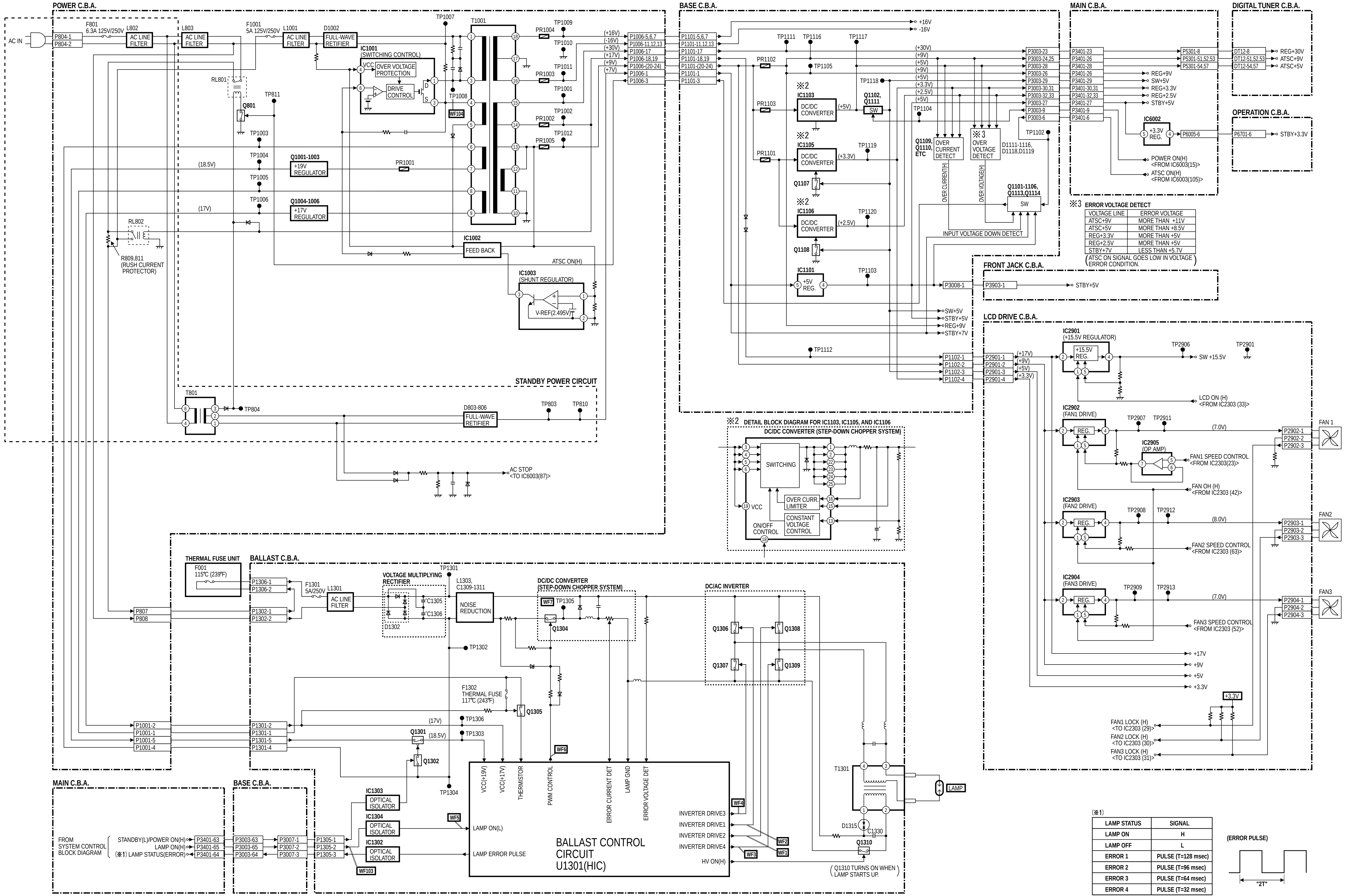
OVERALL BLOCK DIAGRAM


REAR JACK C.B.A.
BASE C.B.A.
P3501
P3002
COMPONENT AUDIO IN 1 (L/R)
COMPONENT AUDIO IN 2 (L/R)
COMPONENT AUDIO IN 3 (L/R)
AUDIO IN 1 (L/R)
AUDIO IN 2(L/R)
IC4003,4004
AUDIO SW
IC4002
SW
IC4001
OP AMP
IC4201
SOUND PROCESSOR
IC4502
OP AMP
IC4501
AUDIO AMP
P4503
SPEAKER-R
SPEAKER-L
I2C SERIAL DATA/CLOCK
AUDIO OUT (L/R)
VIDEO OUT
AUDIO OUT(L/R)
VIDEO OUT
COMPONENT IN 1(Y/PB/PR)
COMPONENT IN 2(Y/PB/PR)
COMPONENT IN 3(Y/PB/PR)
IC3001
COMPONENT1 Y/PB/PR
COMPONENT2 Y/PB/PR
COMPONENT3 Y/PB/PR
COMPONENT4 Y/PB/PR
MAIN Y/V, PB/C, PR
VIDEO IN 1
VIDEO IN 2
VIDEO IN 3
TUNER VIDEO
VIDEO SW
S-VIDEO IN 1
S-VIDEO IN 2
S-VIDEO IN 3
TUNER VIDEO(Y/C)
SUB Y/V, PB/C, PR
FRONT JACK C.B.A.
P3902
P3004
VIDEO IN 3
S-VIDEO IN 3
AUDIO IN 3 (L/R)
P3901
P3001
Q3202-Q3212
RGB-->YUV CONVERTER
RGB IN
MAIN C.B.A.
P3003
P3401
IC5004
MAIN VIDEO SIGNAL PROCESS
A/D
• 3D Y/C SEPARATION
• NTSC DECODER
GC3FM_s
IC5103
SUB VIDEO SIGNAL PROCESS
A/D
• 2D Y/C SEPARATION
• NTSC DECODER
GC3FS_s
IC5301
VIDEO SIGNAL PROCESS
FIFO I/F
SDRAM I/F
DATA BUS (32bit)
IC5304
64M SDRAM
<FOR SCALER(720p CONVERTER)>
YUV DATA (10bit)
• I/P CONVERTER
• PICTURE CONTROL
• MULTI WINDOW (PICTURE IN PICTURE SPLIT SCREEN SEARCH)
• SCALER(720p CONVERTER)
Y DATA (8bit)
UV DATA (8bit)
GC4U
IC5701
FPGA
R DATA (8bit)
G DATA (8bit)
B DATA (8bit)
• OSD MIX
• DID CONVERTER
IC5705
LVDS TRANSMITTER
TTL PARALLEL TO LVDS SERIAL CONVERTER
P5701
P2501
OSD-R,B,G DATA
IC5306
DATA BUS (32bit)
64M SDRAM
<FOR IP CONVERTER, MULTI WINDOW, 3D Y/C SEPARATION, ETC>
IC6006
EEPROM
• LAMP TIME DATA
• ADJUSTMENT DATA
IC6007
EEPROM
• SETTING DATA OF EACH IC's FOR MAIN C.B.A.
• USER ADJUSTMENT DATA
• ADJUSTMENT DATA
IC6003
MAIN MICRO-CONTROLLER
IC6009
FLASH MEMORY
DATA BUS (16bit)
SERIAL DATA/CLOCK
I2C SERIAL DATA/CLOCK
SERIAL DATA (UART)
ERROR
FILTER ERROR DETECTION
LAMP COVER OPEN(H)
LAMP ON(H)
LAMP STATUS(ERROR)
LCD DRIVE C.B.A.
IC2503
LVDS RECEIVER
LVDS DATA/CLOCK
LVDS SERIAL TO TTL PARALLEL CONVERTER
IC2505
SIGNAL PROCESS FOR LCD PANEL
R DATA (8bit)
G DATA (8bit)
B DATA (8bit)
COLOR CORRECTION
R DATA (10bit)
G DATA (10bit)
B DATA (10bit)
IC2002
IC2001
IC2003
SAMPLING HOLD
D/A
R DATA (12bit)
G DATA (12bit)
B DATA (12bit)
P2001
P2002
P2003
LCD(R)
LCD(G)
LCD(B)
• NON-UNIFORMITY COLOR COMPENSATION
• GAMMA CORRECTION
• WHITE BALANCE CONTROL
TIMING GENERATOR
IC2004, Q2001-Q2010
LEVEL SHIFTER
SERIAL DATA/CLOCK
IC2303
LCD MICRO-CONTROLLER
FAN1 SPEED CONTROL
FAN2 SPEED CONTROL
FAN3 SPEED CONTROL
FAN ON(H)
FAN1 LOCK(H)
FAN2 LOCK(H)
FAN3 LOCK(H)
THERMO TEMP DATA 3
THERMO TEMP DATA 1
ERROR
IC2902
IC2903
IC2904
DRIVE
P2902
P2903
P2904
(FAN 1)
(FAN 2)
(FAN 3)
IC2301
EEPROM
ADJUSTMENT DATA/SETTING DATA OF EACH IC's FOR LCD DRIVE C.B.A.
IC2905
OP AMP
LAMP COVER OPEN(H)
COVER SWITCH C.B.A.
P2502
P2912
COVER SW
THERMISTOR 1 C.B.A.
P2302
P2811
TEMPERATURE SENSOR
THERMISTOR 2 C.B.A.
P2303
P2821
TEMPERATURE SENSOR
DIGITAL TUNER C.B.A.
TUNER
ANT-IN
DIGITAL AUDIO OUT
IC8202
SW
I2C SERIAL DATA/CLOCK
TUNER VIDEO (ANALOG)
IF (DIGITAL)
TUNER AUDIO (ANALOG)
AUDIO OUT (DIGITAL)
IC8211,8216,8221,8240,ETC
DIGITAL TUNER SIGNAL PROCESS /SD CARD SIGNAL PROCESS
TUNER VIDEO (ANALOG)
TUNER VIDEO (Y/C)
AUDIO (L/R)
I2C SERIAL DATA/CLOCK
SERIAL DATA (UART)
Y DATA (8bit)
UV DATA (8bit)
IC8232
SW
TUNER AUDIO (L/R)
DT12
P5301
CARD C.B.A.
SD CARD
P9005
P9003
DT10
DATA BUS (8bit)
IC4101
SW
HDMI AUDIO IN(L/R)
TUNER AUDIO IN(L/R)
HDMI AUDIO IN(L/R)
HDMI IN (AV IN)
IC5801
EEPROM
HDMI INFORMATION DATA
IC5805
HDMI INTERFACE
HDMI Y DATA (8bit)
HDMI UV DATA (8bit)
I2C SERIAL DATA/CLOCK
TMDS DATA/CLOCK
IC5807
D/A
HDMI AUDIO IN(L/R)
FRONT JACK C.B.A.
BASE C.B.A.
P3903
P3008
P3003
P3401
+5V
TEMP
LAMP
DRIVE
REMOTE SENSOR
OPERATION C.B.A.
POWER
P6701
P6005
OPERATION BUTTON (KEY MATRIX)
BASE C.B.A.
P3401
P3003
P3007
BALLAST C.B.A.
P1302
P1305
BALLAST CIRCUIT
LAMP
AC IN
POWER C.B.A.
P807,808
POWER SUPPLY CIRCUIT

OVERALL BLOCK DIAGRAM

PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

POWER SUPPLY BLOCK DIAGRAM


POWER C.B.A.
AC IN
P804-1
P804-2
F801
6.3A 125V/250V
L802
AC LINE FILTER
L803
AC LINE FILTER
F1001
5A 125V/250V
L1001
AC LINE FILTER
D1002
FULL-WAVE RETIFIER
IC1001
(SWITCHING CONTROL)
OVER VOLTAGE PROTECTION
DRIVE CONTROL
VCC
T1001
TP1007
TP1008
TP1009
TP1010
TP1011
TP1001
TP1002
TP1012
PR1004
PR1003
PR1002
PR1005
PR1001
RL801
Q801
TP811
TP1003
TP1004
TP1005
TP1006
Q1001-1003
+19V REGULATOR
Q1004-1006
+17V REGULATOR
(18.5V)
(17V)
RL802
R809,811
(RUSH CURRENT PROTECTOR)
IC1002
FEED BACK
ATSC ON(H)
IC1003
(SHUNT REGULATOR)
V-REF(2.495V)
(+16V)
(-16V)
(+30V)
(+17V)
(+9V)
(+7V)
P1006-5,6,7
P1006-11,12,13
P1006-17
P1006-18,19
P1006-(20-24)
P1006-1
P1006-3
STANDBY POWER CIRCUIT
T801
TP804
D803-806
FULL-WAVE RETIFIER
TP803
TP810
AC STOP
<TO IC6003(87)>
BASE C.B.A.
P1101-5,6,7
P1101-11,12,13
P1101-17
P1101-18,19
P1101-(20-24)
P1101-1
P1101-3
+16V
-16V
TP1111
TP1116
TP1117
PR1102
TP1105
※2
IC1103
DC/DC CONVERTER
(+5V)
TP1118
Q1102, Q1111
SW
PR1103
TP1104
※2
IC1105
DC/DC CONVERTER
(+3.3V)
TP1119
PR1101
Q1107
※2
IC1106
DC/DC CONVERTER
(+2.5V)
TP1120
Q1108
IC1101
+5V REG.
TP1103
Q1109, Q1110, ETC
OVER CURRENT DETECT
※3
OVER VOLTAGE DETECT
D1111-1116, D1118,D1119
TP1102
OVER CURRENT(H)
OVER VOLTAGE(H)
Q1101-1106, Q1113,Q1114
SW
INPUT VOLTAGE DOWN DETECT
(+30V)
(+9V)
(+5V)
(+9V)
(+5V)
(+3.3V)
(+2.5V)
(+5V)
P3003-23
P3003-24,25
P3003-28
P3003-26
P3003-29
P3003-30,31
P3003-32,33
P3003-27
P3003-9
P3003-6
P3008-1
SW+5V
STBY+5V
REG+9V
STBY+7V
TP1112
P1102-1
P1102-2
P1102-3
P1102-4
MAIN C.B.A.
P3401-23
P3401-26
P3401-28
P3401-26
P3401-29
P3401-30,31
P3401-32,33
P3401-27
P3401-9
P3401-6
P5301-8
P5301-51,52,53
P5301-54,57
REG+9V
SW+5V
REG+3.3V
REG+2.5V
STBY+5V
IC6002
+3.3V REG.
P6005-6
POWER ON(H)
<FROM IC6003(15)>
ATSC ON(H)
<FROM IC6003(105)>
DIGITAL TUNER C.B.A.
DT12-8
DT12-51,52,53
DT12-54,57
REG+30V
ATSC+9V
ATSC+5V
OPERATION C.B.A.
P6701-6
STBY+3.3V
FRONT JACK C.B.A.
P3903-1
STBY+5V
LCD DRIVE C.B.A.
IC2901
(+15.5V REGULATOR)
+15.5V REG.
TP2906
TP2901
SW +15.5V
P2901-1
P2901-2
P2901-3
P2901-4
(+17V)
(+9V)
(+5V)
(+3.3V)
LCD ON (H)
<FROM IC2303 (33)>
IC2902
(FAN1 DRIVE)
REG.
TP2907
TP2911
(7.0V)
IC2905
(OP AMP)
FAN1 SPEED CONTROL
<FROM IC2303(23)>
FAN OH (H)
<FROM IC2303 (42)>
P2902-1
P2902-2
P2902-3
FAN 1
IC2903
(FAN2 DRIVE)
TP2908
TP2912
(8.0V)
FAN2 SPEED CONTROL
<FROM IC2303 (63)>
P2903-1
P2903-2
P2903-3
FAN2
IC2904
(FAN3 DRIVE)
TP2909
TP2913
(7.0V)
FAN3 SPEED CONTROL
<FROM IC2303 (52)>
P2904-1
P2904-2
P2904-3
FAN3
+17V
+9V
+5V
+3.3V
+3.3V
FAN1 LOCK (H)
<TO IC2303 (29)>
FAN2 LOCK (H)
<TO IC2303 (30)>
FAN3 LOCK (H)
<TO IC2303 (31)>
※2 DETAIL BLOCK DIAGRAM FOR IC1103, IC1105, AND IC1106
DC/DC CONVERTER (STEP-DOWN CHOPPER SYSTEM)
SWITCHING
OVER CURR LIMITER
CONSTANT VOLTAGE CONTROL
VCC
ON/OFF CONTROL
THERMAL FUSE UNIT
F001
115℃ (239℉)
BALLAST C.B.A.
P1306-1
P1306-2
P807
P808
P1302-1
P1302-2
F1301
5A/250V
L1301
AC LINE FILTER
VOLTAGE MULTIPLYING RECTIFIER
C1305
C1306
D1302
TP1301
L1303, C1309-1311
NOISE REDUCTION
DC/DC CONVERTER
(STEP-DOWN CHOPPER SYSTEM)
WF7
TP1305
Q1304
DC/AC INVERTER
Q1306
Q1308
Q1307
Q1309
TP1302
F1302
THERMAL FUSE
117℃ (243℉)
Q1305
P1001-2
P1001-1
P1001-5
P1001-4
P1301-2
P1301-1
P1301-5
P1301-4
(17V)
TP1306
Q1301
(18.5V)
TP1303
Q1302
WF6
TP1304
VCC(+19V)
VCC(+17V)
THERMISTOR
PWM CONTROL
ERROR CURRENT DET
LAMP GND
ERROR VOLTAGE DET
T1301
LAMP
INVERTER DRIVE3
INVERTER DRIVE1
INVERTER DRIVE2
INVERTER DRIVE4
WF4
WF2
WF1
WF3
HV ON(H)
D1315
C1330
Q1310
(Q1310 TURNS ON WHEN LAMP STARTS UP.)
BALLAST CONTROL CIRCUIT U1301(HIC)
LAMP ON(L)
LAMP ERROR PULSE
WF5
IC1303
OPTICAL ISOLATOR
IC1304
OPTICAL ISOLATOR
IC1302
OPTICAL ISOLATOR
WF103
WF104
MAIN C.B.A.
BASE C.B.A.
FROM SYSTEM CONTROL BLOCK DIAGRAM
STANDBY(L)/POWER ON(H)
LAMP ON(H)
(※1) LAMP STATUS(ERROR)
P3401-63
P3401-65
P3401-64
P3003-63
P3003-65
P3003-64
P3007-1
P3007-2
P3007-3
P1305-1
P1305-2
P1305-3
(ERROR PULSE)
"2T"

※3 **ERROR VOLTAGE DETECT**

VOLTAGE LINE	ERROR VOLTAGE
ATSC+9V	MORE THAN +11V
ATSC+5V	MORE THAN +8.5V
REG+3.3V	MORE THAN +5V
REG+2.5V	MORE THAN +5V
STBY+7V	LESS THAN +5.7V

(ATSC ON SIGNAL GOES LOW IN VOLTAGE ERROR CONDITION.)

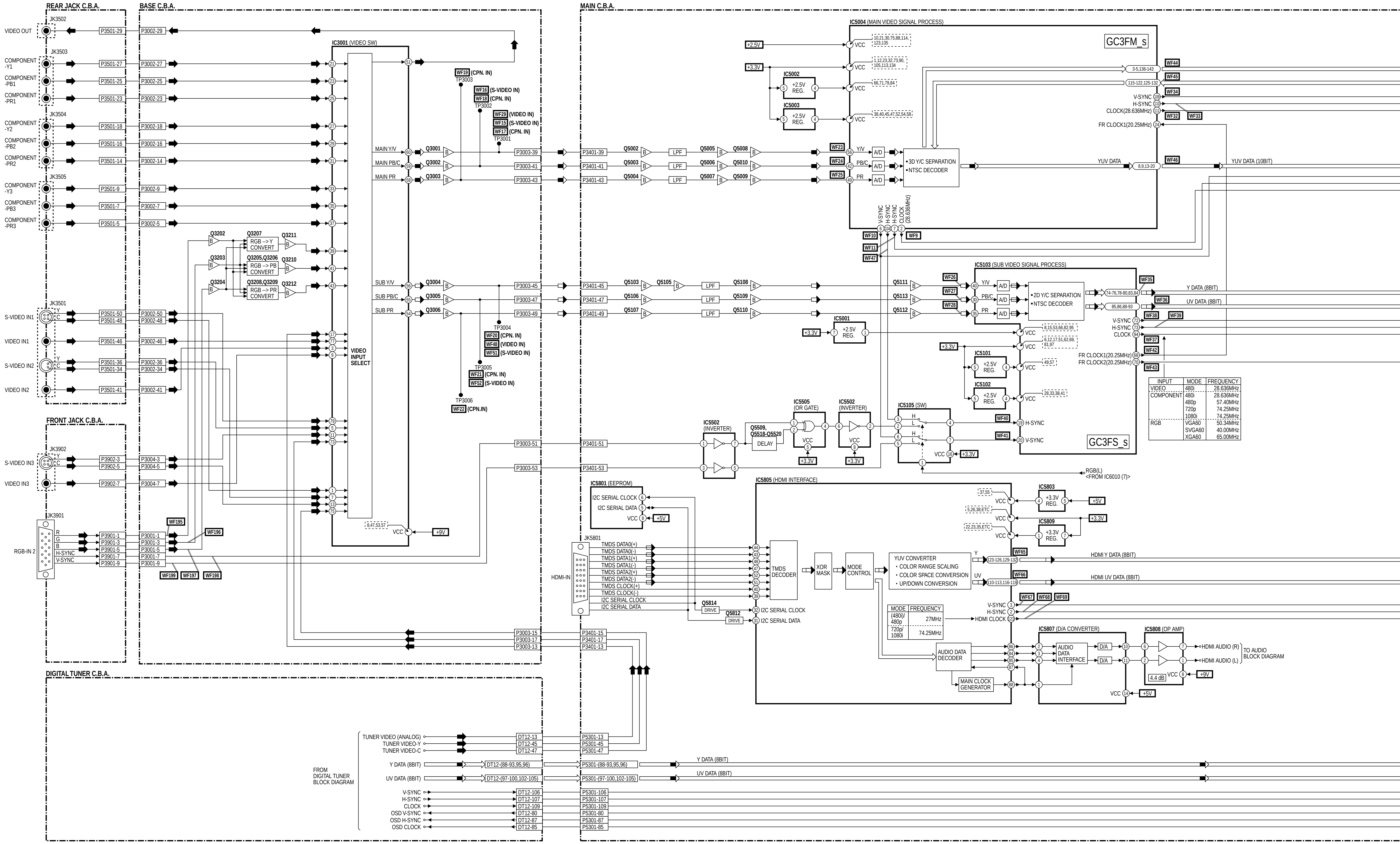
(※1)

LAMP STATUS	SIGNAL
LAMP ON	H
LAMP OFF	L
ERROR 1	PULSE (T=128 msec)
ERROR 2	PULSE (T=96 msec)
ERROR 3	PULSE (T=64 msec)
ERROR 4	PULSE (T=32 msec)

POWER SUPPLY BLOCK DIAGRAM

PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

VIDEO SIGNAL PATH I BLOCK DIAGRAM (1/2)


REAR JACK C.B.A.
BASE C.B.A.
MAIN C.B.A.
FRONT JACK C.B.A.
DIGITAL TUNER C.B.A.
JK3502
VIDEO OUT
JK3503
COMPONENT -Y1
COMPONENT -PB1
COMPONENT -PR1
JK3504
COMPONENT -Y2
COMPONENT -PB2
COMPONENT -PR2
JK3505
COMPONENT -Y3
COMPONENT -PB3
COMPONENT -PR3
JK3501
S-VIDEO IN1
VIDEO IN1
S-VIDEO IN2
VIDEO IN2
JK3902
S-VIDEO IN3
VIDEO IN3
JK3901
RGB-IN 2
R
G
B
H-SYNC
V-SYNC
IC3001 (VIDEO SW)
VIDEO INPUT SELECT
MAIN Y/V
MAIN PB/C
MAIN PR
SUB Y/V
SUB PB/C
SUB PR
Q3001
Q3002
Q3003
Q3004
Q3005
Q3006
Q3202
Q3203
Q3204
Q3207
Q3205,Q3206
Q3208,Q3209
Q3211
Q3210
Q3212
RGB --> Y CONVERT
RGB --> PB CONVERT
RGB --> PR CONVERT
TP3001
TP3002
TP3003
TP3004
TP3005
TP3006
WF19 (CPN. IN)
WF16 (S-VIDEO IN)
WF18 (CPN. IN)
WF29 (VIDEO IN)
WF15 (S-VIDEO IN)
WF17 (CPN. IN)
WF20 (CPN. IN)
WF48 (VIDEO IN)
WF51 (S-VIDEO IN)
WF21 (CPN. IN)
WF52 (S-VIDEO IN)
WF22 (CPN.IN)
WF195
WF196
WF197
WF198
WF199
VCC
+9V
IC5004 (MAIN VIDEO SIGNAL PROCESS)
GC3FM_s
IC5002
IC5003
+2.5V REG.
+2.5V
+3.3V
Q5002
Q5003
Q5004
Q5005
Q5006
Q5007
Q5008
Q5010
Q5009
LPF
A/D
3D Y/C SEPARATION
NTSC DECODER
YUV DATA
YUV DATA (10BIT)
V-SYNC
H-SYNC
CLOCK(28.636MHz)
FR CLOCK1(20.25MHz)
WF44
WF45
WF34
WF32
WF33
WF46
WF23
WF24
WF25
WF10
WF11
WF47
WF9
IC5103 (SUB VIDEO SIGNAL PROCESS)
GC3FS_s
Q5103
Q5105
Q5106
Q5107
Q5108
Q5109
Q5110
Q5111
Q5113
Q5112
2D Y/C SEPARATION
NTSC DECODER
Y DATA (8BIT)
UV DATA (8BIT)
CLOCK
FR CLOCK1(20.25MHz)
FR CLOCK2(20.25MHz)
WF26
WF27
WF28
WF35
WF36
WF38
WF39
WF37
WF42
WF43
WF40
WF41
IC5001
IC5101
IC5102
IC5502 (INVERTER)
IC5505 (OR GATE)
Q5509, Q5518-Q5520
DELAY
IC5105 (SW)
RGB(L) <FROM IC6010 (7)>
IC5801 (EEPROM)
I2C SERIAL CLOCK
I2C SERIAL DATA
+5V
JK5801
HDMI-IN
TMDS DATA0(+)
TMDS DATA0(-)
TMDS DATA1(+)
TMDS DATA1(-)
TMDS DATA2(+)
TMDS DATA2(-)
TMDS CLOCK(+)
TMDS CLOCK(-)
Q5814 DRIVE
Q5812 DRIVE
IC5805 (HDMI INTERFACE)
TMDS DECODER
XOR MASK
MODE CONTROL
YUV CONVERTER
COLOR RANGE SCALING
COLOR SPACE CONVERSION
UP/DOWN CONVERSION
HDMI Y DATA (8BIT)
HDMI UV DATA (8BIT)
HDMI CLOCK
WF65
WF66
WF67
WF68
WF69
IC5803
IC5809
+3.3V REG.
AUDIO DATA DECODER
MAIN CLOCK GENERATOR
IC5807 (D/A CONVERTER)
AUDIO DATA INTERFACE
D/A
IC5808 (OP AMP)
4.4 dB
HDMI AUDIO (R)
HDMI AUDIO (L)
TO AUDIO BLOCK DIAGRAM
FROM DIGITAL TUNER BLOCK DIAGRAM
TUNER VIDEO (ANALOG)
TUNER VIDEO-Y
TUNER VIDEO-C
Y DATA (8BIT)
UV DATA (8BIT)
V-SYNC
H-SYNC
CLOCK
OSD V-SYNC
OSD H-SYNC
OSD CLOCK

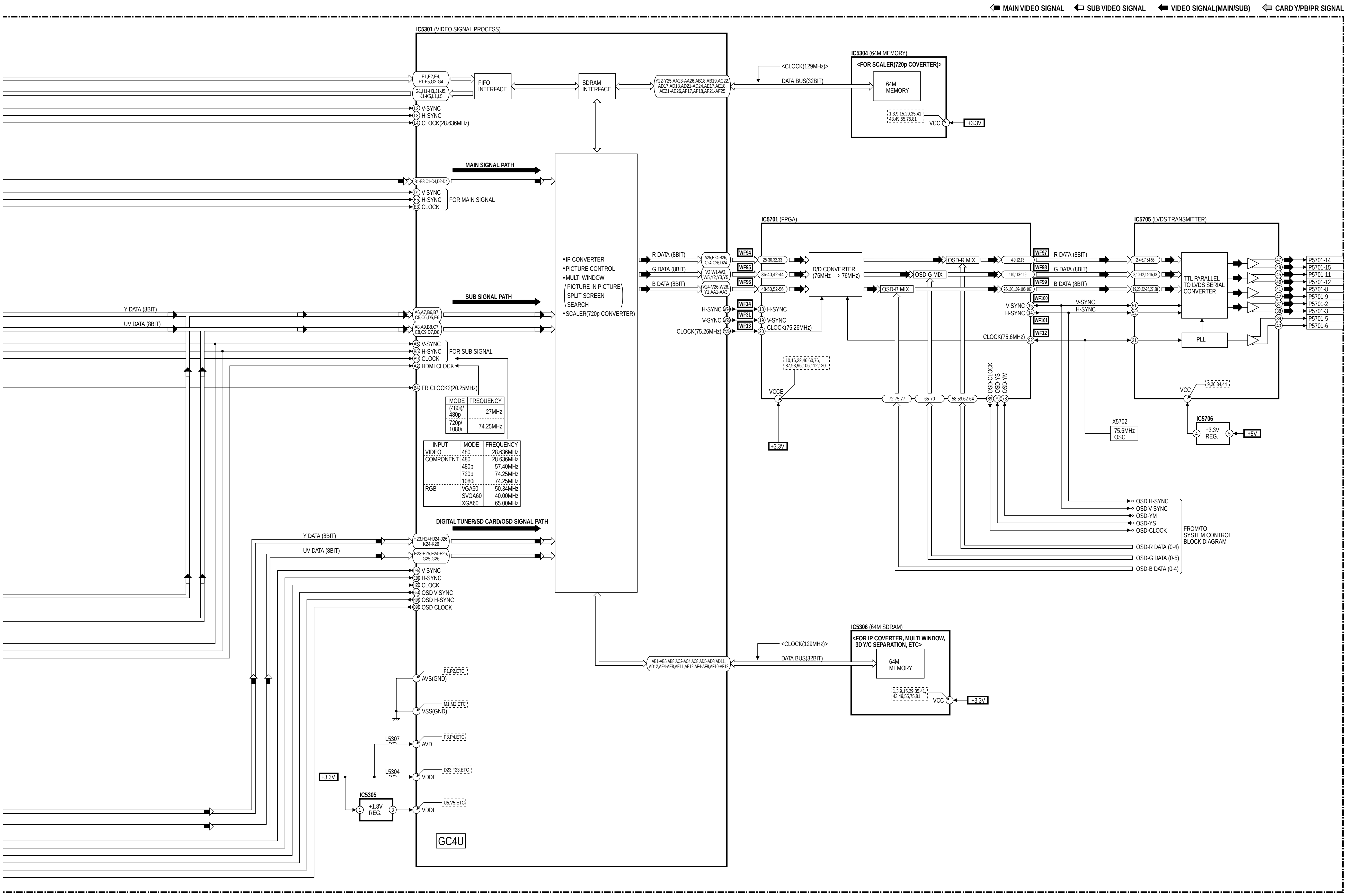
MODE	FREQUENCY
(480i)/480p	27MHz
720p/1080i	74.25MHz

INPUT	MODE	FREQUENCY
VIDEO	480i	28.636MHz
COMPONENT	480i	28.636MHz
	480p	57.40MHz
	720p	74.25MHz
	1080i	74.25MHz
RGB	VGA60	50.34MHz
	SVGA60	40.00MHz
	XGA60	65.00MHz

VIDEO SIGNAL PATH I BLOCK DIAGRAM (1/2)

PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

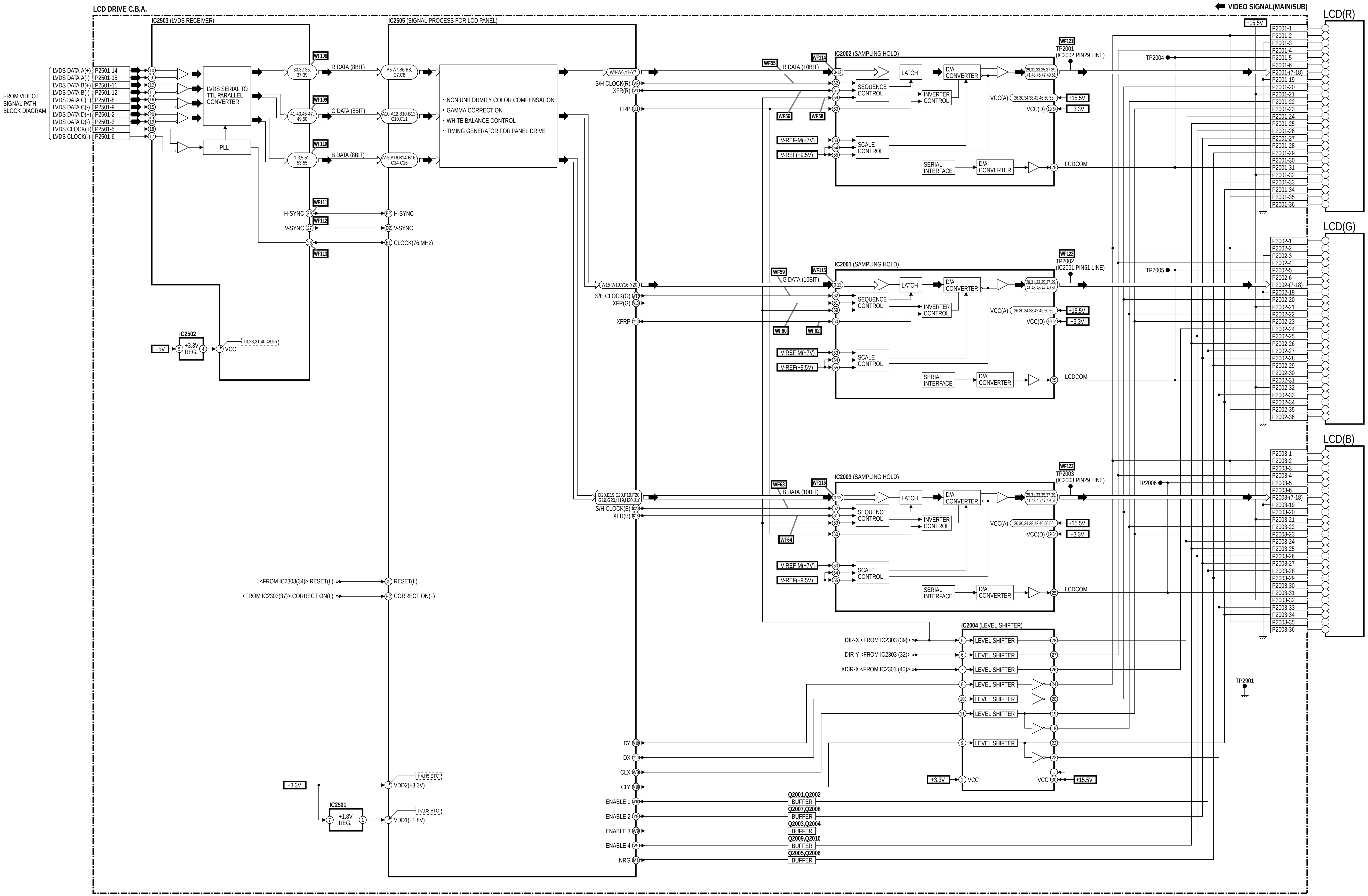
VIDEO SIGNAL PATH I BLOCK DIAGRAM (2/2)


MAIN VIDEO SIGNAL
SUB VIDEO SIGNAL
VIDEO SIGNAL(MAIN/SUB)
CARD Y/PB/PR SIGNAL
IC5301 (VIDEO SIGNAL PROCESS)
E1,E2,E4, F1-F5,G2-G4
G1,H1-H3,J1-J5, K1-K5,L1,L5
FIFO INTERFACE
SDRAM INTERFACE
Y22-Y25,AA23-AA26,AB18,AB19,AC22, AD17,AD18,AD21-AD24,AE17,AE18, AE21-AE26,AF17,AF18,AF21-AF25
L2 V-SYNC
L3 H-SYNC
L4 CLOCK(28.636MHz)
<CLOCK(129MHz)>
DATA BUS(32BIT)
IC5304 (64M MEMORY)
<FOR SCALER(720p COVERTER)>
64M MEMORY
1,3,9,15,29,35,41, 43,49,55,75,81
VCC
+3.3V
MAIN SIGNAL PATH
B1-B3,C1-C4,D2-D4
D1 V-SYNC
E5 H-SYNC
E3 CLOCK
FOR MAIN SIGNAL
•IP CONVERTER
•PICTURE CONTROL
•MULTI WINDOW
(PICTURE IN PICTURE
SPLIT SCREEN
SEARCH)
•SCALER(720p CONVERTER)
SUB SIGNAL PATH
Y DATA (8BIT)
UV DATA (8BIT)
A6,A7,B6,B7, C5,C6,D5,E6
A8,A9,B8,C7, C8,C9,D7,D8
A5 V-SYNC
B5 H-SYNC
B9 CLOCK
FOR SUB SIGNAL
A2 HDMI CLOCK
B4 FR CLOCK2(20.25MHz)
R DATA (8BIT)
G DATA (8BIT)
B DATA (8BIT)
A25,B24-B26, C24-C26,D24
V3,W1-W3, W5,Y2,Y3,Y5
V24-V26,W26, Y1,AA1-AA3
H-SYNC W24
V-SYNC W25
CLOCK(75.26MHz) Y26
WF94
WF95
WF96
WF14
WF31
WF13
IC5701 (FPGA)
25-30,32,33
36-40,42-44
48-50,52-56
18 H-SYNC
19 V-SYNC
20 CLOCK(75.26MHz)
D/D CONVERTER (76MHz ---> 76MHz)
OSD-R MIX
OSD-G MIX
OSD-B MIX
4-9,12,13
110,113-119
98-100,102-105,107
WF97
WF98
WF99
WF100
WF101
WF12
V-SYNC 15
H-SYNC 14
CLOCK(75.6MHz) 92
10,16,22,46,60,76, 87,93,96,106,112,120
VCCE
+3.3V
72-75,77
65-70
58,59,62-64
OSD-CLOCK 89
OSD-YS 79
OSD-YM 78
IC5705 (LVDS TRANSMITTER)
R DATA (8BIT)
G DATA (8BIT)
B DATA (8BIT)
V-SYNC
H-SYNC
2-4,6,7,54-56
8,10-12,14-16,18
19,20,22-25,27,28
51
52
31
TTL PARALLEL TO LVDS SERIAL CONVERTER
PLL
47 P5701-14 LVDS DATA A(+)
48 P5701-15 LVDS DATA A(-)
45 P5701-11 LVDS DATA B(+)
46 P5701-12 LVDS DATA B(-)
41 P5701-8 LVDS DATA C(+)
42 P5701-9 LVDS DATA C(-)
37 P5701-2 LVDS DATA D(+)
38 P5701-3 LVDS DATA D(-)
39 P5701-5 LVDS CLOCK(+)
40 P5701-6 LVDS CLOCK(-)
TO VIDEO II SIGNAL PATH BLOCK DIAGRAM
VCC
9,26,34,44
X5702
75.6MHz OSC
IC5706
+3.3V REG.
4
5
+5V
OSD H-SYNC
OSD V-SYNC
OSD-YM
OSD-YS
OSD-CLOCK
OSD-R DATA (0-4)
OSD-G DATA (0-5)
OSD-B DATA (0-4)
FROM/TO SYSTEM CONTROL BLOCK DIAGRAM
DIGITAL TUNER/SD CARD/OSD SIGNAL PATH
Y DATA (8BIT)
UV DATA (8BIT)
H23,H24HJ24-J26, K24-K26
E23-E25,F24-F26, G25,G26
D25 V-SYNC
E26 H-SYNC
H25 CLOCK
G24 OSD V-SYNC
H26 OSD H-SYNC
D26 OSD CLOCK
AB1-AB5,AB8,AC2-AC4,AC8,AD5-AD8,AD11, AD12,AE4-AE8,AE11,AE12,AF4-AF8,AF10-AF12
<CLOCK(129MHz)>
DATA BUS(32BIT)
IC5306 (64M SDRAM)
<FOR IP COVERTER, MULTI WINDOW, 3D Y/C SEPARATION, ETC>
64M MEMORY
1,3,9,15,29,35,41, 43,49,55,75,81
VCC
+3.3V
P1,P2,ETC
AVS(GND)
M1,M2,ETC
VSS(GND)
L5307
P3,P4,ETC
AVD
L5304
D23,F23,ETC
VDDE
+3.3V
IC5305
+1.8V REG.
1
3
U5,V5,ETC
VDDI
GC4U

MODE	FREQUENCY
(480i)/ 480p	27MHz
720p/ 1080i	74.25MHz

INPUT	MODE	FREQUENCY
VIDEO	480i	28.636MHz
COMPONENT	480i	28.636MHz
	480p	57.40MHz
	720p	74.25MHz
	1080i	74.25MHz
RGB	VGA60	50.34MHz
	SVGA60	40.00MHz
	XGA60	65.00MHz

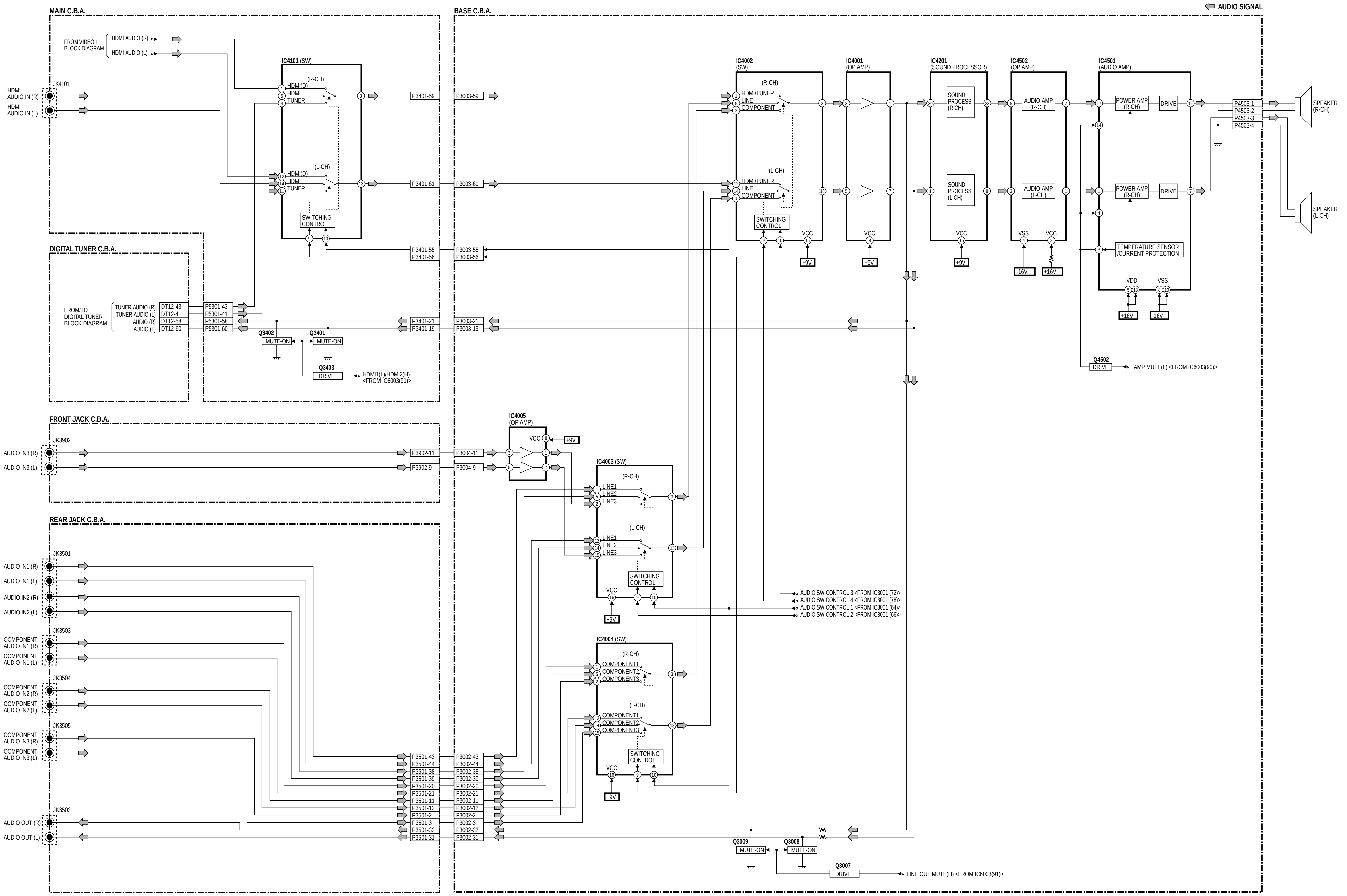
VIDEO SIGNAL PATH II BLOCK DIAGRAM


LCD DRIVE C.B.A.
VIDEO SIGNAL(MAIN/SUB)
FROM VIDEO I SIGNAL PATH BLOCK DIAGRAM
LVDS DATA A(+) P2501-14
LVDS DATA A(-) P2501-15
LVDS DATA B(+) P2501-11
LVDS DATA B(-) P2501-12
LVDS DATA C(+) P2501-8
LVDS DATA C(-) P2501-9
LVDS DATA D(+) P2501-2
LVDS DATA D(-) P2501-3
LVDS CLOCK(+) P2501-5
LVDS CLOCK(-) P2501-6
IC2503 (LVDS RECEIVER)
LVDS SERIAL TO TTL PARALLEL CONVERTER
PLL
R DATA (8BIT)
G DATA (8BIT)
B DATA (8BIT)
WF108
WF109
WF110
WF111
WF112
WF113
H-SYNC
V-SYNC
CLOCK(76 MHz)
IC2505 (SIGNAL PROCESS FOR LCD PANEL)
• NON UNIFORMITY COLOR COMPENSATION
• GAMMA CORRECTION
• WHITE BALANCE CONTROL
• TIMING GENERATOR FOR PANEL DRIVE
IC2502
+3.3V REG.
+5V
VCC
<FROM IC2303(34)> RESET(L)
<FROM IC2303(37)> CORRECT ON(L)
RESET(L)
CORRECT ON(L)
+3.3V
IC2501
+1.8V REG.
VDD2(+3.3V)
VDD1(+1.8V)
S/H CLOCK(R)
XFR(R)
FRP
S/H CLOCK(G)
XFR(G)
XFRP
S/H CLOCK(B)
XFR(B)
DY
DX
CLX
CLY
ENABLE 1
ENABLE 2
ENABLE 3
ENABLE 4
NRG
Q2001,Q2002 BUFFER
Q2007,Q2008 BUFFER
Q2003,Q2004 BUFFER
Q2009,Q2010 BUFFER
Q2005,Q2006 BUFFER
IC2002 (SAMPLING HOLD)
IC2001 (SAMPLING HOLD)
IC2003 (SAMPLING HOLD)
R DATA (10BIT)
G DATA (10BIT)
B DATA (10BIT)
LATCH
D/A CONVERTER
SEQUENCE CONTROL
INVERTER CONTROL
SCALE CONTROL
SERIAL INTERFACE
V-REF-M(+7V)
V-REF(+9.5V)
VCC(A)
VCC(D)
+15.5V
+3.3V
LCDCOM
WF55
WF56
WF58
WF59
WF60
WF62
WF63
WF64
WF114
WF115
WF116
WF121
WF122
WF123
TP2001 (IC2002 PIN29 LINE)
TP2002 (IC2001 PIN51 LINE)
TP2003 (IC2003 PIN29 LINE)
TP2004
TP2005
TP2006
TP2901
IC2004 (LEVEL SHIFTER)
DIR-X <FROM IC2303 (39)>
DIR-Y <FROM IC2303 (32)>
XDIR-X <FROM IC2303 (40)>
LEVEL SHIFTER
VCC
LCD(R)
LCD(G)
LCD(B)
P2001-1 … P2001-36
P2002-1 … P2002-36
P2003-1 … P2003-36

VIDEO SIGNAL PATH II BLOCK DIAGRAM

PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

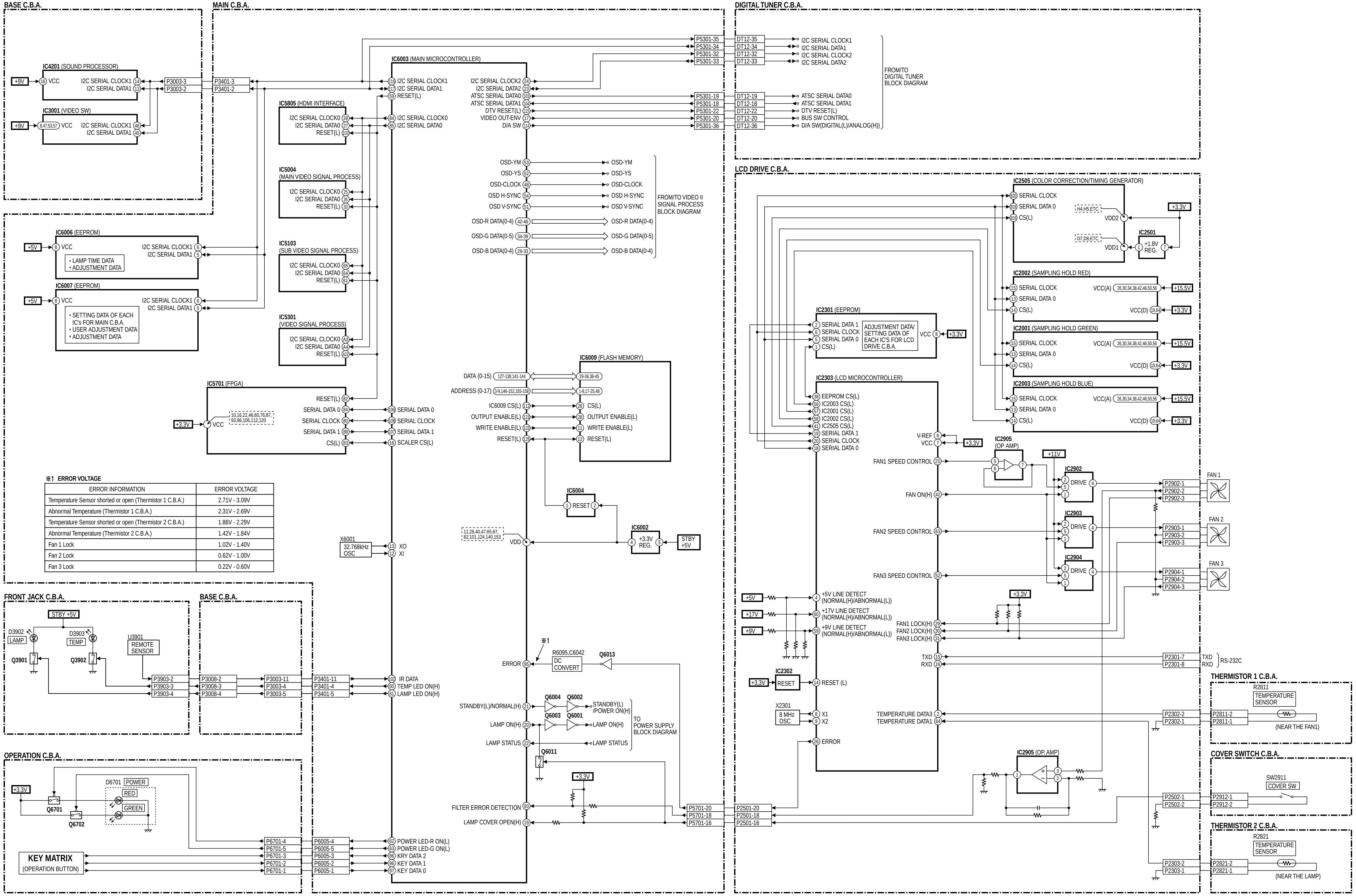
AUDIO SIGNAL PATH BLOCK DIAGRAM


AUDIO SIGNAL
MAIN C.B.A.
BASE C.B.A.
FROM VIDEO I BLOCK DIAGRAM
HDMI AUDIO (R)
HDMI AUDIO (L)
JK4101
HDMI AUDIO IN (R)
HDMI AUDIO IN (L)
IC4101 (SW)
(R-CH)
HDMI(D)
HDMI
TUNER
(L-CH)
SWITCHING CONTROL
P3401-59
P3401-61
P3401-55
P3401-56
P3401-21
P3401-19
P3003-59
P3003-61
P3003-55
P3003-56
P3003-21
P3003-19
DIGITAL TUNER C.B.A.
FROM/TO DIGITAL TUNER BLOCK DIAGRAM
TUNER AUDIO (R)
TUNER AUDIO (L)
AUDIO (R)
AUDIO (L)
DT12-43
DT12-41
DT12-58
DT12-60
P5301-43
P5301-41
P5301-58
P5301-60
Q3402
MUTE-ON
Q3401
MUTE-ON
Q3403
DRIVE
HDMI1(L)/HDMI2(H) <FROM IC6003(91)>
IC4002 (SW)
HDMI/TUNER
LINE
COMPONENT
VCC
+9V
IC4001 (OP AMP)
IC4201 (SOUND PROCESSOR)
SOUND PROCESS (R-CH)
SOUND PROCESS (L-CH)
IC4502 (OP AMP)
AUDIO AMP (R-CH)
AUDIO AMP (L-CH)
VSS
-16V
+16V
IC4501 (AUDIO AMP)
POWER AMP (R-CH)
DRIVE
TEMPERATURE SENSOR /CURRENT PROTECTION
VDD
P4503-1
P4503-2
P4503-3
P4503-4
SPEAKER (R-CH)
SPEAKER (L-CH)
Q4502
AMP MUTE(L) <FROM IC6003(90)>
FRONT JACK C.B.A.
JK3902
AUDIO IN3 (R)
AUDIO IN3 (L)
P3902-11
P3902-9
P3004-11
P3004-9
IC4005 (OP AMP)
IC4003 (SW)
LINE1
LINE2
LINE3
AUDIO SW CONTROL 3 <FROM IC3001 (72)>
AUDIO SW CONTROL 4 <FROM IC3001 (78)>
AUDIO SW CONTROL 1 <FROM IC3001 (64)>
AUDIO SW CONTROL 2 <FROM IC3001 (66)>
IC4004 (SW)
COMPONENT1
COMPONENT2
COMPONENT3
REAR JACK C.B.A.
JK3501
AUDIO IN1 (R)
AUDIO IN1 (L)
AUDIO IN2 (R)
AUDIO IN2 (L)
JK3503
COMPONENT AUDIO IN1 (R)
COMPONENT AUDIO IN1 (L)
JK3504
COMPONENT AUDIO IN2 (R)
COMPONENT AUDIO IN2 (L)
JK3505
COMPONENT AUDIO IN3 (R)
COMPONENT AUDIO IN3 (L)
JK3502
AUDIO OUT (R)
AUDIO OUT (L)
P3501-43
P3501-44
P3501-38
P3501-39
P3501-20
P3501-21
P3501-11
P3501-12
P3501-2
P3501-3
P3501-32
P3501-31
P3002-43
P3002-44
P3002-38
P3002-39
P3002-20
P3002-21
P3002-11
P3002-12
P3002-2
P3002-3
P3002-32
P3002-31
Q3009
Q3008
Q3007
LINE OUT MUTE(H) <FROM IC6003(91)>

AUDIO SIGNAL PATH BLOCK DIAGRAM

PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

SYSTEM CONTROL BLOCK DIAGRAM


BASE C.B.A.
MAIN C.B.A.
DIGITAL TUNER C.B.A.
LCD DRIVE C.B.A.
FRONT JACK C.B.A.
BASE C.B.A.
OPERATION C.B.A.
THERMISTOR 1 C.B.A.
COVER SWITCH C.B.A.
THERMISTOR 2 C.B.A.
IC4201 (SOUND PROCESSOR)
+9V
VCC
I2C SERIAL CLOCK1
I2C SERIAL DATA1
IC3001 (VIDEO SW)
P3003-3
P3003-2
P3401-3
P3401-2
IC6006 (EEPROM)
+5V
• LAMP TIME DATA
• ADJUSTMENT DATA
IC6007 (EEPROM)
• SETTING DATA OF EACH IC's FOR MAIN C.B.A.
• USER ADJUSTMENT DATA
• ADJUSTMENT DATA
IC6003 (MAIN MICROCONTROLLER)
RESET(L)
I2C SERIAL CLOCK0
I2C SERIAL DATA0
I2C SERIAL CLOCK2
I2C SERIAL DATA2
ATSC SERIAL DATA0
ATSC SERIAL DATA1
DTV RESET(L)
VIDEO OUT-ENV
D/A SW
IC5805 (HDMI INTERFACE)
IC5004 (MAIN VIDEO SIGNAL PROCESS)
IC5103 (SUB VIDEO SIGNAL PROCESS)
IC5301 (VIDEO SIGNAL PROCESS)
IC5701 (FPGA)
+3.3V
10,16,22,46,60,76,87, 93,96,106,112,120
SERIAL DATA 0
SERIAL CLOCK
SERIAL DATA 1
CS(L)
SCALER CS(L)
OSD-YM
OSD-YS
OSD-CLOCK
OSD H-SYNC
OSD V-SYNC
OSD-R DATA(0-4)
OSD-G DATA(0-5)
OSD-B DATA(0-4)
FROM/TO VIDEO II SIGNAL PROCESS BLOCK DIAGRAM
IC6009 (FLASH MEMORY)
DATA (0-15)
ADDRESS (0-17)
IC6009 CS(L)
OUTPUT ENABLE(L)
WRITE ENABLE(L)
IC6004
RESET
IC6002
+3.3V REG.
STBY +5V
VDD
11,28,40,47,65,67, 82,101,124,140,153
X6001 32.768kHz OSC
XO
XI
※1
ERROR
R6095,C6042 DC CONVERT
Q6013
STANDBY(L)/NORMAL(H)
LAMP ON(H)
LAMP STATUS
Q6004
Q6002
Q6003
Q6001
STANDBY(L) /POWER ON(H)
TO POWER SUPPLY BLOCK DIAGRAM
Q6011
FILTER ERROR DETECTION
LAMP COVER OPEN(H)
P5701-20
P5701-18
P5701-16
P2501-20
P2501-18
P2501-16
IR DATA
TEMP LED ON(H)
LAMP LED ON(H)
POWER LED-R ON(L)
POWER LED-G ON(L)
KEY DATA 2
KEY DATA 1
KEY DATA 0
D3902 LAMP
D3903 TEMP
Q3901
Q3902
U3901 REMOTE SENSOR
P3903-2
P3903-3
P3903-4
P3008-2
P3008-3
P3008-4
P3003-11
P3003-4
P3003-5
P3401-11
P3401-4
P3401-5
D6701 POWER
RED
GREEN
Q6701
Q6702
KEY MATRIX (OPERATION BUTTON)
P6701-4
P6701-5
P6701-3
P6701-2
P6701-1
P6005-4
P6005-5
P6005-3
P6005-2
P6005-1
P5301-35
P5301-34
P5301-32
P5301-33
P5301-19
P5301-18
P5301-22
P5301-20
P5301-36
DT12-35
DT12-34
DT12-32
DT12-33
DT12-19
DT12-18
DT12-22
DT12-20
DT12-36
I2C SERIAL CLOCK1
I2C SERIAL DATA1
I2C SERIAL CLOCK2
I2C SERIAL DATA2
ATSC SERIAL DATA0
ATSC SERIAL DATA1
DTV RESET(L)
BUS SW CONTROL
D/A SW(DIGITAL(L)/ANALOG(H))
FROM/TO DIGITAL TUNER BLOCK DIAGRAM
IC2505 (COLOR CORRECTION/TIMING GENERATOR)
SERIAL CLOCK
SERIAL DATA 0
CS(L)
H4,H5,ETC
D7,D8,ETC
VDD2
VDD1
IC2501 +1.8V REG.
IC2002 (SAMPLING HOLD RED)
IC2001 (SAMPLING HOLD GREEN)
IC2003 (SAMPLING HOLD BLUE)
VCC(A)
VCC(D)
26,30,34,38,42,46,50,56
+15.5V
IC2301 (EEPROM)
ADJUSTMENT DATA/ SETTING DATA OF EACH IC'S FOR LCD DRIVE C.B.A.
IC2303 (LCD MICROCONTROLLER)
EEPROM CS(L)
IC2003 CS(L)
IC2001 CS(L)
IC2002 CS(L)
IC2505 CS(L)
V-REF
IC2905 (OP AMP)
+11V
FAN1 SPEED CONTROL
FAN ON(H)
FAN2 SPEED CONTROL
FAN3 SPEED CONTROL
IC2902 DRIVE
IC2903 DRIVE
IC2904 DRIVE
P2902-1
P2902-2
P2902-3
P2903-1
P2903-2
P2903-3
P2904-1
P2904-2
P2904-3
FAN 1
FAN 2
FAN 3
+5V LINE DETECT (NORMAL(H)/ABNORMAL(L))
+17V LINE DETECT (NORMAL(H)/ABNORMAL(L))
+9V LINE DETECT (NORMAL(H)/ABNORMAL(L))
+17V
FAN1 LOCK(H)
FAN2 LOCK(H)
FAN3 LOCK(H)
TXD
RXD
P2301-7
P2301-8
RS-232C
IC2302 RESET
RESET (L)
X2301 8 MHz OSC
X1
X2
TEMPERATURE DATA3
TEMPERATURE DATA1
P2302-2
P2302-1
P2811-2
P2811-1
R2811 TEMPERATURE SENSOR
(NEAR THE FAN1)
IC2905 (OP AMP)
P2502-1
P2502-2
P2912-1
P2912-2
SW2911 COVER SW
P2303-2
P2303-1
P2821-2
P2821-1
R2821 TEMPERATURE SENSOR
(NEAR THE LAMP)

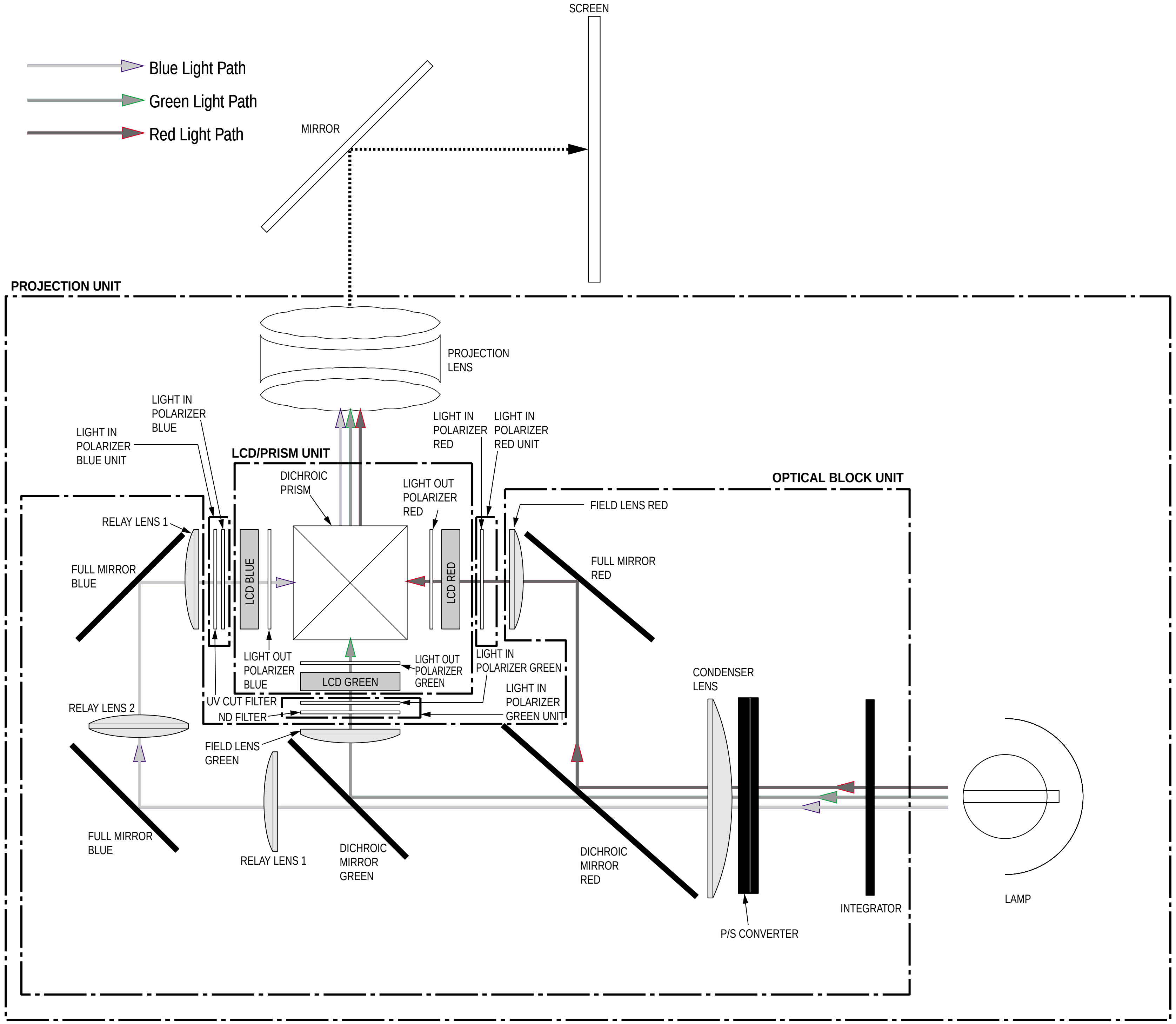
※1 ERROR VOLTAGE

ERROR INFORMATION	ERROR VOLTAGE
Temperature Sensor shorted or open (Thermistor 1 C.B.A.)	2.71V - 3.09V
Abnormal Temperature (Thermistor 1 C.B.A.)	2.31V - 2.69V
Temperature Sensor shorted or open (Thermistor 2 C.B.A.)	1.86V - 2.29V
Abnormal Temperature (Thermistor 2 C.B.A.)	1.42V - 1.84V
Fan 1 Lock	1.02V - 1.40V
Fan 2 Lock	0.62V - 1.00V
Fan 3 Lock	0.22V - 0.60V

SYSTEM CONTROL BLOCK DIAGRAM

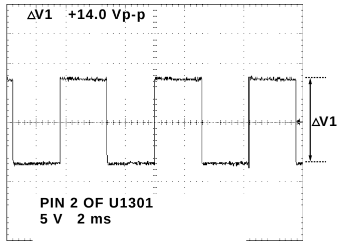
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

OPTICAL BLOCK DIAGRAM

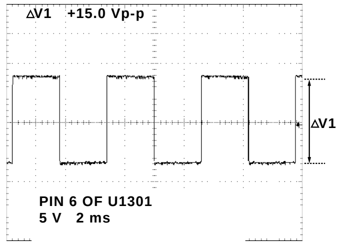

Blue Light Path
Green Light Path
Red Light Path
SCREEN
MIRROR
PROJECTION UNIT
PROJECTION LENS
LIGHT IN POLARIZER BLUE
LIGHT IN POLARIZER BLUE UNIT
LCD/PRISM UNIT
DICHROIC PRISM
LIGHT IN POLARIZER RED
LIGHT IN POLARIZER RED UNIT
LIGHT OUT POLARIZER RED
OPTICAL BLOCK UNIT
FIELD LENS RED
RELAY LENS 1
FULL MIRROR BLUE
LCD BLUE
LCD RED
FULL MIRROR RED
LIGHT OUT POLARIZER BLUE
LCD GREEN
LIGHT OUT POLARIZER GREEN
LIGHT IN POLARIZER GREEN
LIGHT IN POLARIZER GREEN UNIT
UV CUT FILTER
ND FILTER
RELAY LENS 2
FIELD LENS GREEN
CONDENSER LENS
FULL MIRROR BLUE
RELAY LENS 1
DICHROIC MIRROR GREEN
DICHROIC MIRROR RED
INTEGRATOR
LAMP
P/S CONVERTER

SIGNAL WAVEFORMS

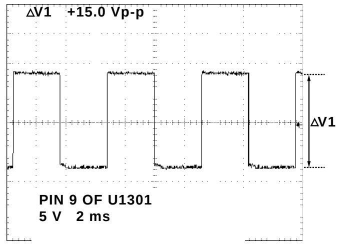
(Input: Color Bar Signal)



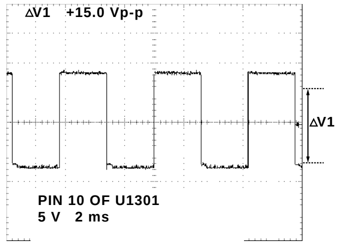
WF 1



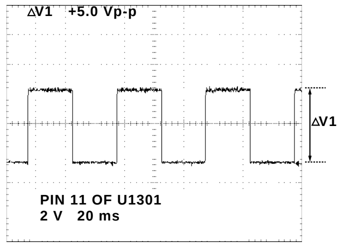
WF 2



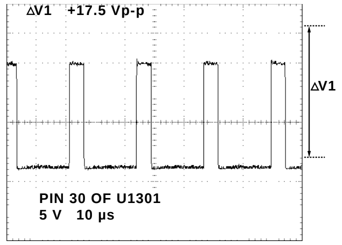
WF 3



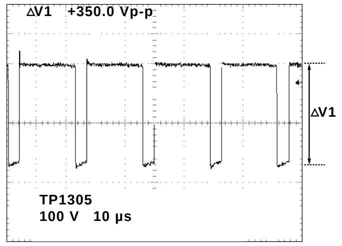
WF 4



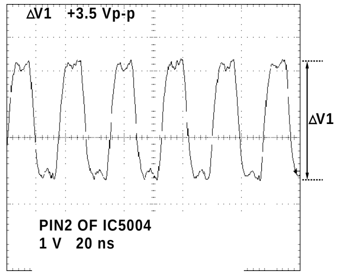
WF 5



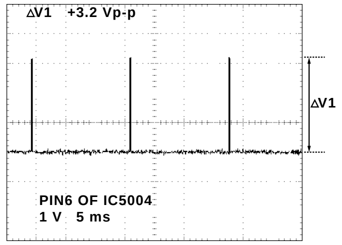
WF 6



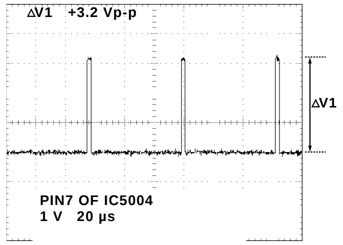
WF 7



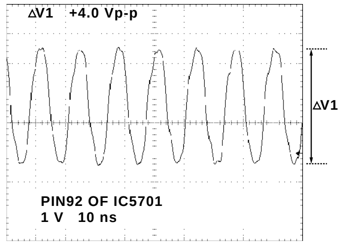
WF 9



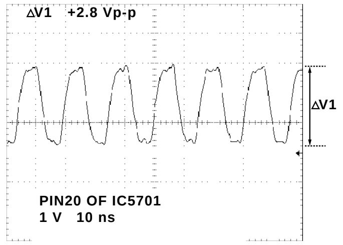
WF 10



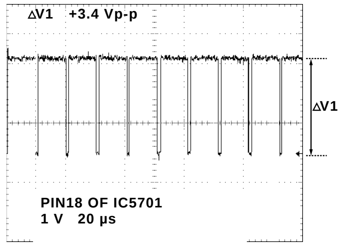
WF 11



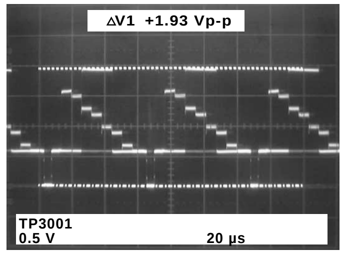
WF 12



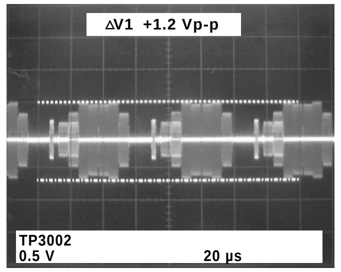
WF 13



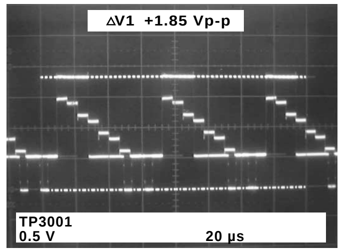
WF 14



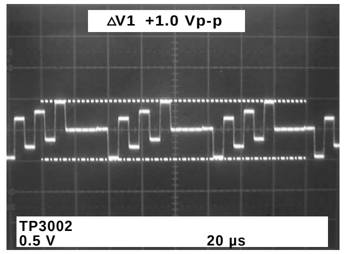
WF 15



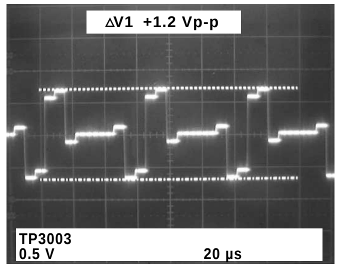
WF 16



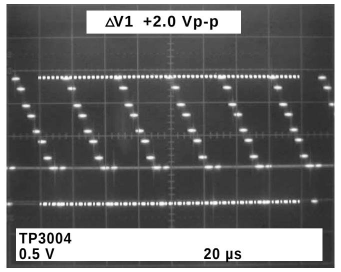
WF 17



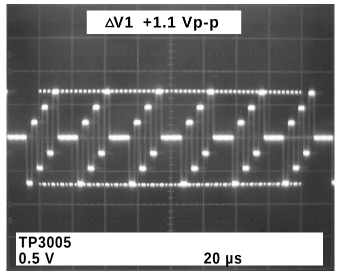
WF 18



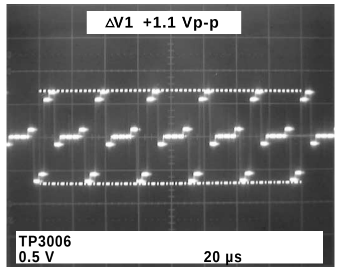
WF 19



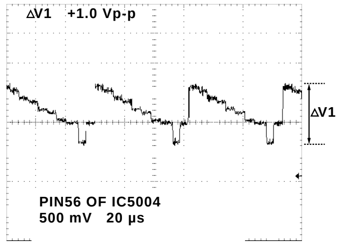
WF 20



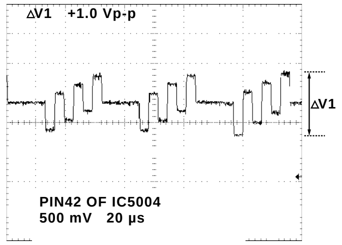
WF 21



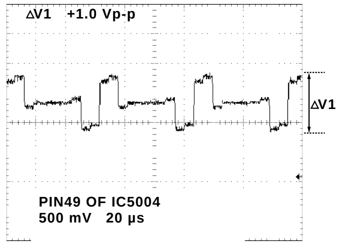
WF 22



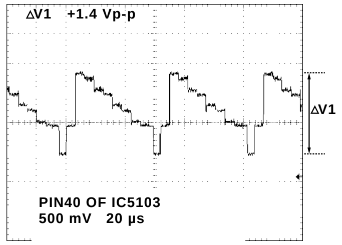
WF 23



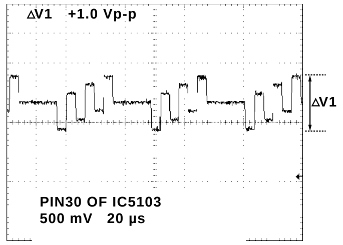
WF 24



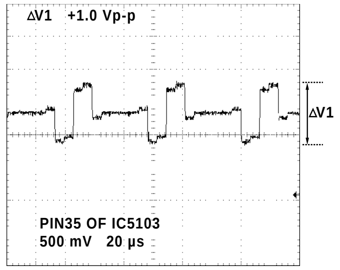
WF 25



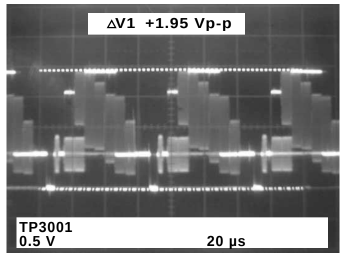
WF 26



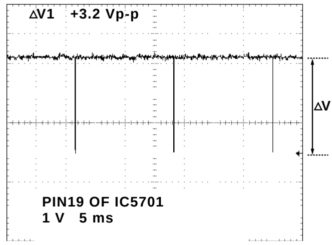
WF 27



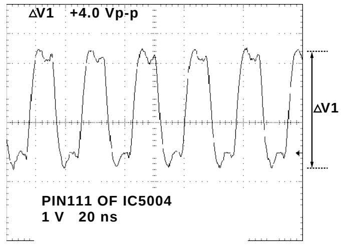
WF 28



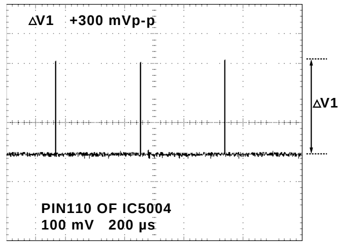
WF 29



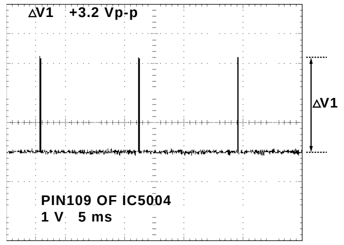
WF 31



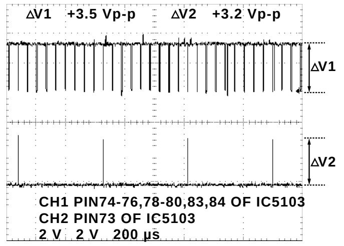
WF 32



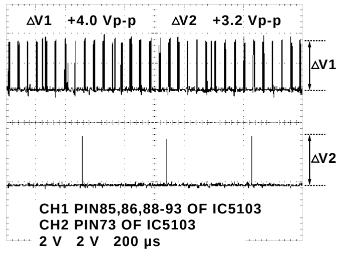
WF 33



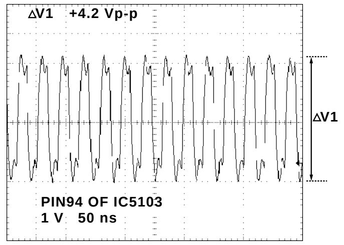
WF 34



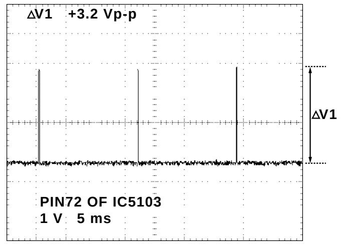
CH1 WF 35
CH2 WF 39



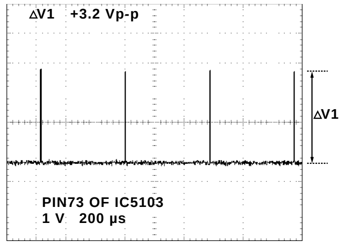
CH1 WF 36
CH2 WF 39



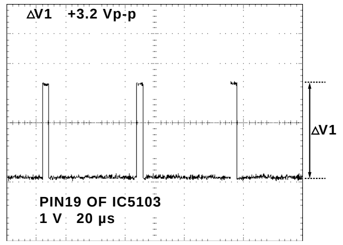
WF 37



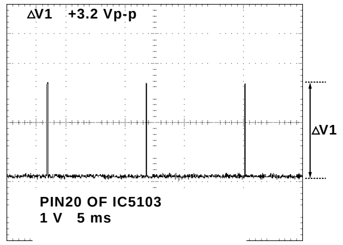
WF 38



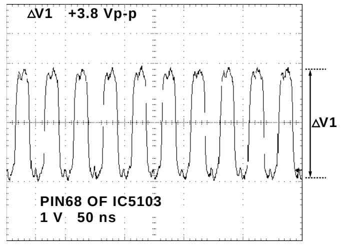
WF 39



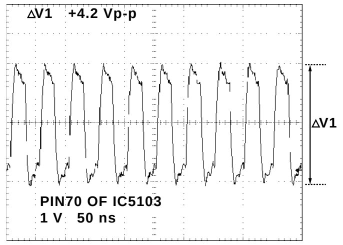
WF 40



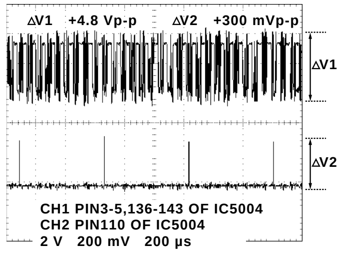
WF 41



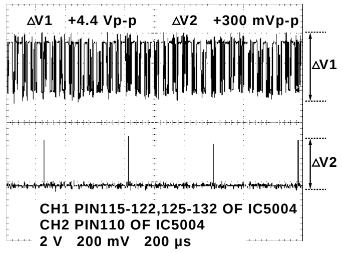
WF 42



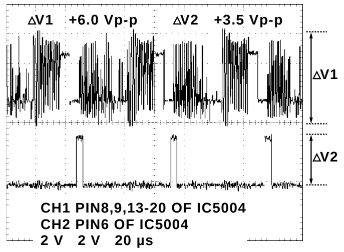
WF 43



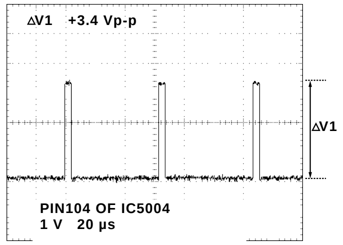
CH1 WF 44
CH2 WF 33



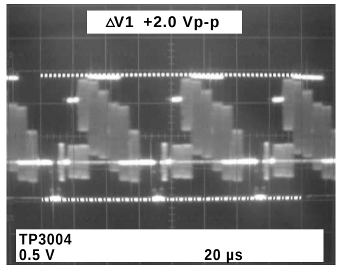
CH1 WF 45
CH2 WF 33



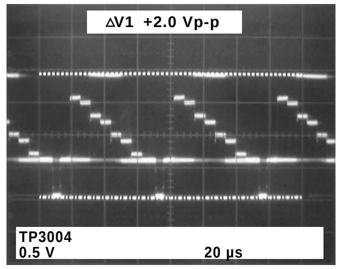
CH1 WF 46
CH2 WF 10



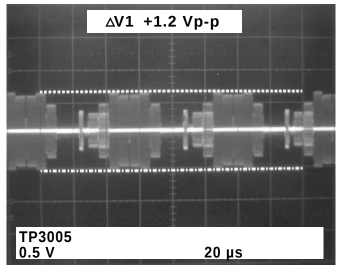
WF 47



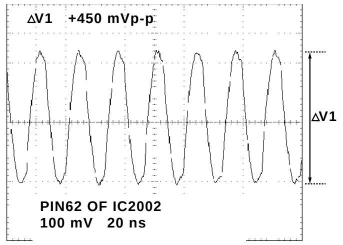
WF 48



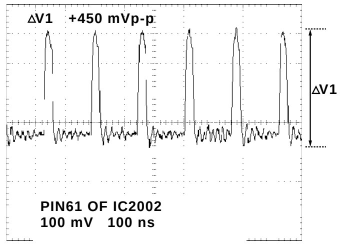
WF 51



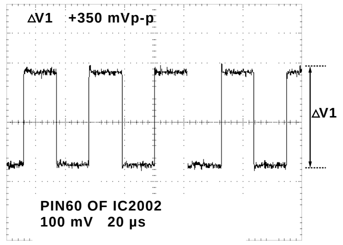
WF 52



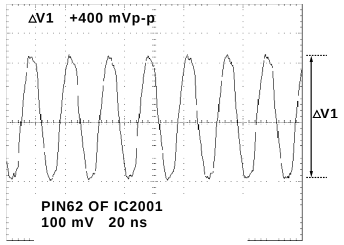
WF 55



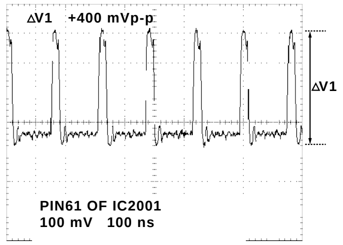
WF 56



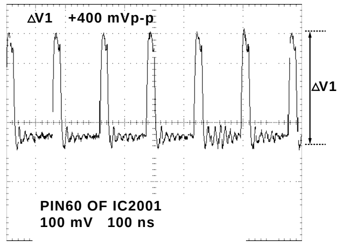
WF 58



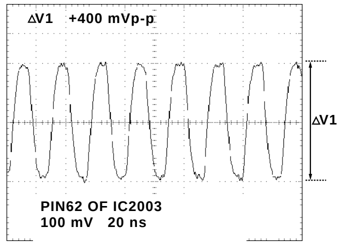
WF 59



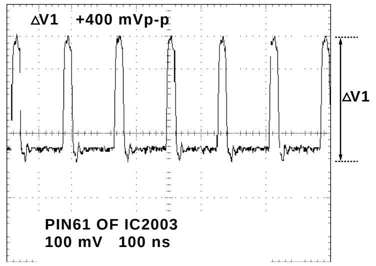
WF 60



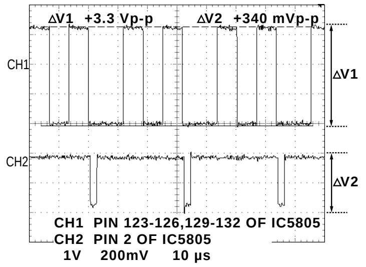
WF 61



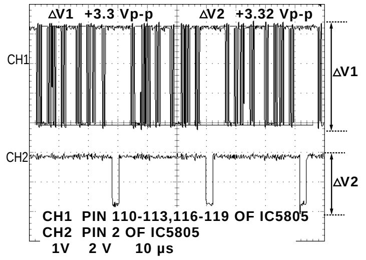
WF 63



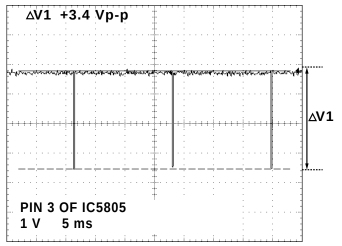
WF 64



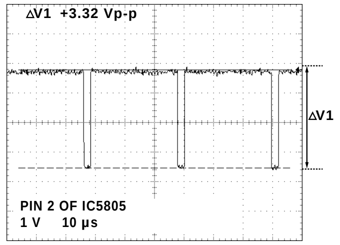
CH1 WF 65
CH2 WF 68



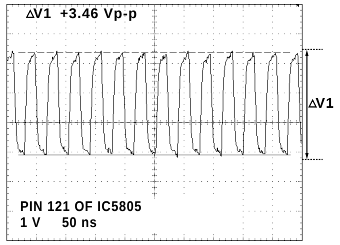
CH1 WF 66
CH2 WF 68



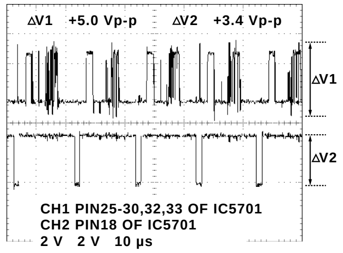
WF 67



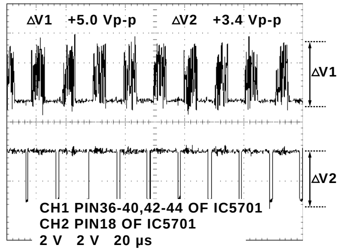
WF 68



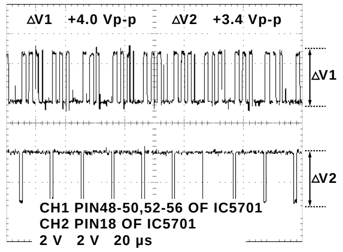
WF 69



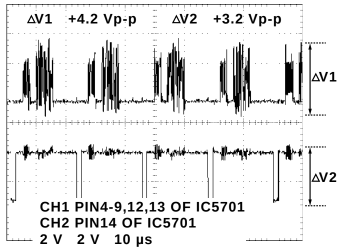
CH1 WF 94
CH2 WF 14



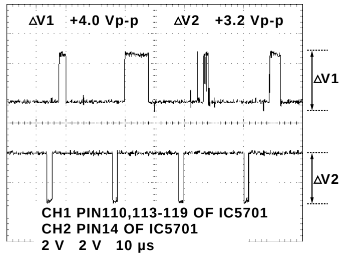
CH1 WF 95
CH2 WF14



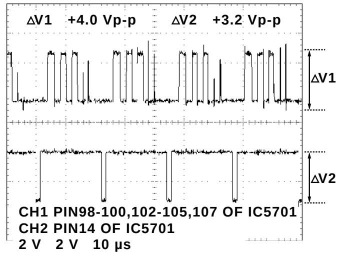
CH1 WF 96
CH2 WF 14



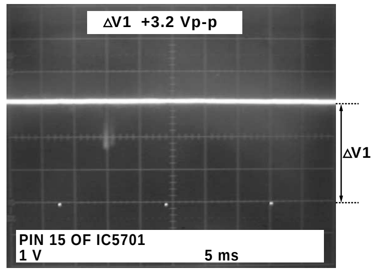
CH1 WF 97
CH2 WF 101



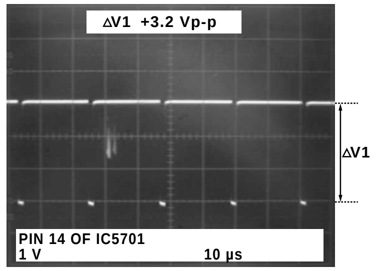
CH1 WF 98
CH2 WF 101



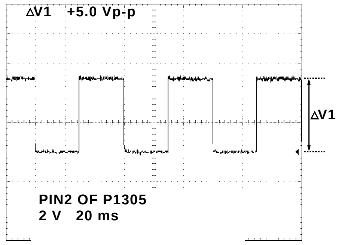
CH1 WF 99
CH2 WF 101



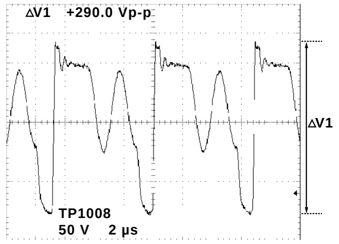
WF 100



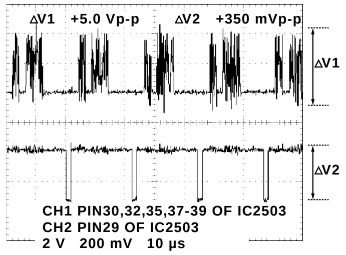
WF 101



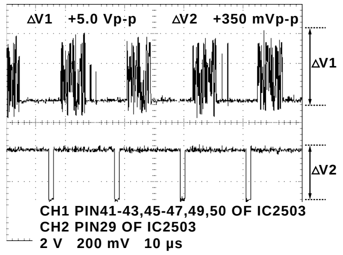
WF 103



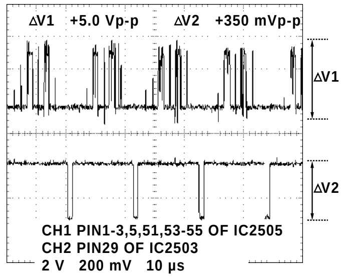
WF 104



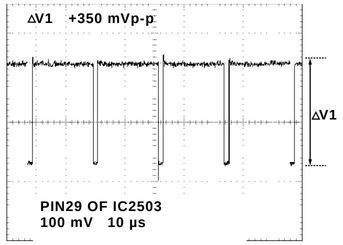
CH1 WF 108
CH2 WF 111



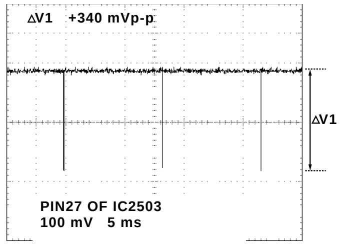
CH1 WF 109
CH2 WF 111



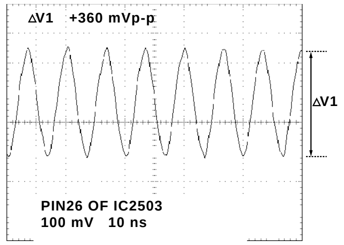
CH1 WF 110
CH2 WF 111



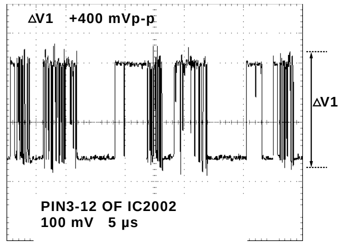
WF 111



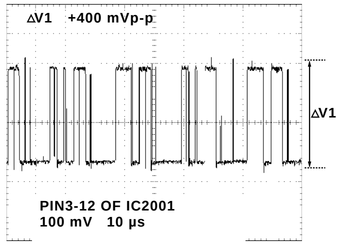
WF 112



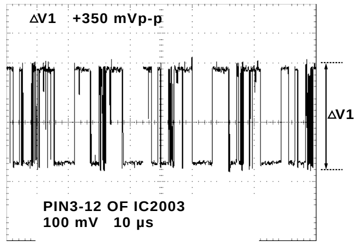
WF 113



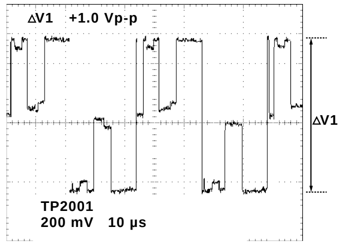
WF 114



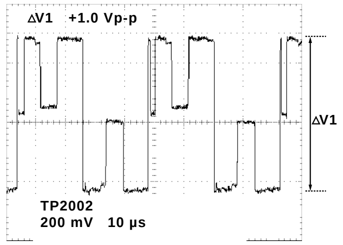
WF 115



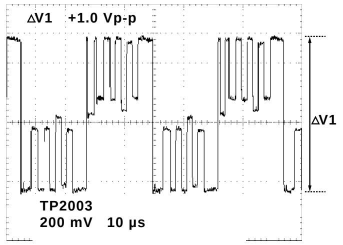
WF 116



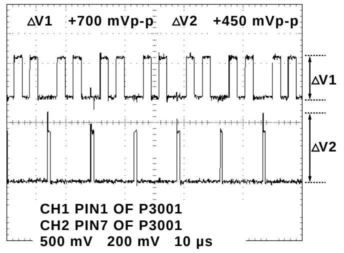
WF 121



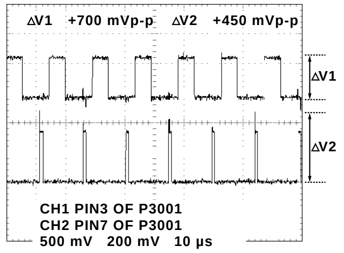
WF 122



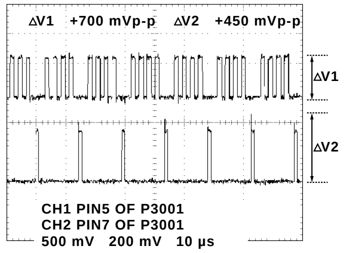
WF 123



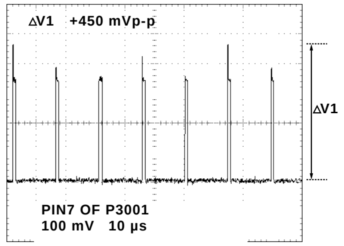
CH1 WF 195
CH2 WF 198



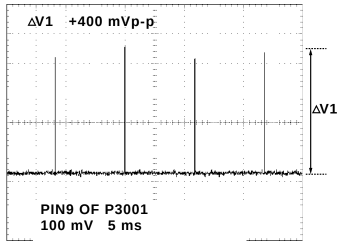
CH1 WF 196
CH2 WF 198



CH1 WF 197
CH2 WF 198



WF 198



WF 199

12 SCHEMATIC DIAGRAMS

12.1. SCHEMATIC DIAGRAM & CIRCUIT BOARD LAYOUT NOTES

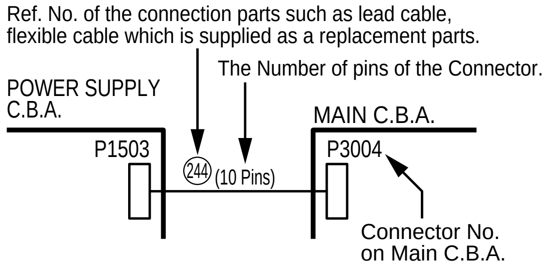
1. **Important safety notice**
   Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components. Use only the specified parts.
2. Do not use the part number shown on this drawing for ordering.
   The correct part number and part value is shown in the parts list, and may be slightly different or amended since this drawing was prepared.
3. Use only original replacement parts:
   To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.
4. Parts different in shape or size may be used.
   However, only interchangeable parts will be supplied as service replacement parts.
5. Test point information
   ● : Test point with a jumper wire across a hole in P.C.B.
   ○ : Test point with no test pin.

Schematic Diagram Notes

1. Indication for Zener Voltage of Zener Diodes
   The Zener Voltage of Zener Diodes are indicated as such on Schematic Diagrams.

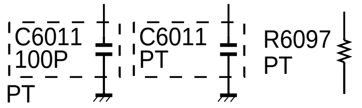
   Example:
   (6.2V)......Zener Voltage
2. How to identify Connectors
   Each connector is labeled with a Connector No. and Pin No. Indicating what it is connected to,
   in other words, its counter part.
   Use the interconnection schematic diagram to find the connection between associated connectors.

Example:
The connections between C.B.A.s are shown below.


Ref. No. of the connection parts such as lead cable,
flexible cable which is supplied as a replacement parts.
The Number of pins of the Connector.
POWER SUPPLY
C.B.A.
MAIN C.B.A.
P1503
244
(10 Pins)
P3004
Connector No.
on Main C.B.A.

3. Parts marked "PT" are not used in any models included in this service model.

Example:


C6011
100P
PT
C6011
PT
R6097
PT

4. Jumper wires are used for WA10, WA5 etc and these are not supplied as replacement parts.

Circuit Board Layout Note

Circuit Board Layout shows components installed for various models.
For proper parts content for the model you are servicing, please refer to the schematic diagram and parts list.

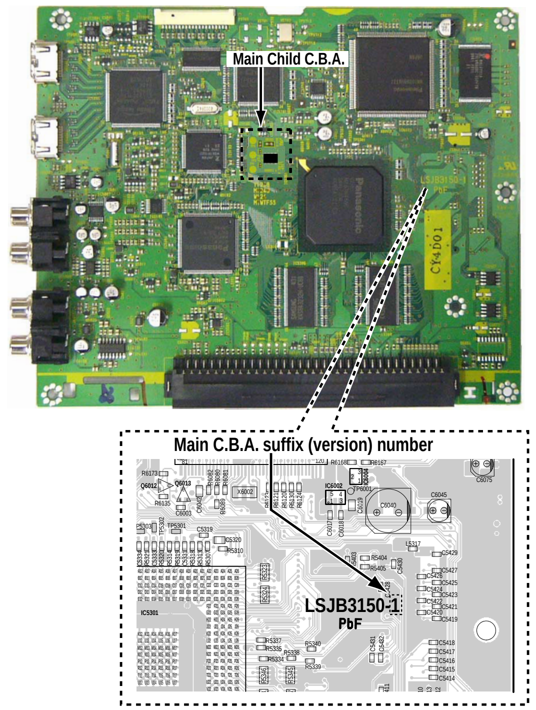
NOTE:
Circuit Board Layout includes components which are not used.

MAIN C.B.A. REPLACEMENT NOTE:

Following parts change are made for early products.
Please be sure to order the proper parts according to the following notes.

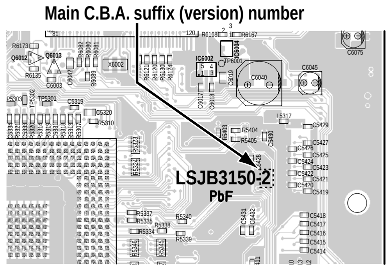
Step 1 **(Main C.B.A. suffix (version) number ①)**

Main C.B.A. (Component Side)


Main Child C.B.A.
Main C.B.A. suffix (version) number
LSJB3150-1
PbF

From first mass production of this unit :
Main Child C.B.A. LSEP3186A (Ref No. E11) marked by ✱1 have been installed on the component side.

Step 2 **(Main C.B.A. suffix (version) number ②)**


Main C.B.A. suffix (version) number
LSJB3150-2
PbF

On running change basis :
1) Main C.B.A. suffix (version) number will be changed from ① to ② to include the circuit of the Main Child C.B.A. onto the Main C.B.A.
2) The parts marked by ✱2 will be mounted on the Main C.B.A.

Ref. No.	Part Name	Step 1	Step 2	
E11	MAIN CHILD C.B.A.	LSEP3186A	- - - - - - - -	✱1
IC5001	IC, LIENAR	- - - - - - - -	C0DBFFD00005	✱2
C5073	C CHIP 50V 470PF	- - - - - - - -	ECJ1VB1H471K	
C5180	C CHIP 6.3V 2.2UF	- - - - - - - -	ECJ2YB0J225K	
C5181	C CHIP 10V 1UF	- - - - - - - -	ECJ1VF1A105Z	

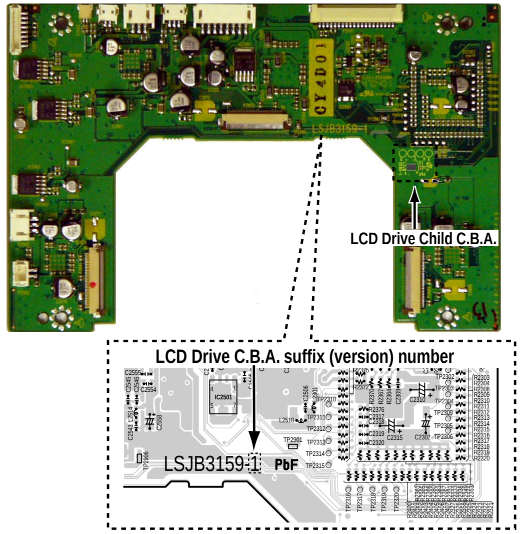
NOTE:
For the details about ✱1~✱2, refer to the Schematic Diagram or the Circuit Board Layout.

LCD DRIVE C.B.A. REPLACEMENT NOTE:

Following parts change are made for early products.
Please be sure to order the proper parts according to the following notes.

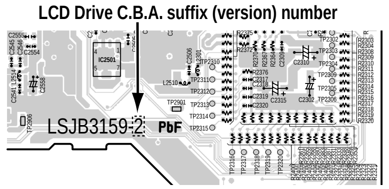
Step 1 **(LCD Drive C.B.A. suffix (version) number ①)**

LCD Drive C.B.A. (Component Side)


LCD Drive Child C.B.A.
LCD Drive C.B.A. suffix (version) number
LSJB3159-1
PbF

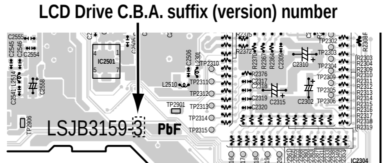
From first mass production of this unit
LCD Drive Child C.B.A. LSEP3185A (Ref No. E111) marked by ✱3 have been installed on the component side.

Step 2 **(LCD Drive C.B.A. suffix (version) number ②)**


LCD Drive C.B.A. suffix (version) number
LSJB3159-2
PbF

On running change basis :
1) The parts marked by ✱4 will be mounted on the LCD Drive C.B.A.
2) The parts marked by ✱5 will be changed.

Step 3 **(LCD Drive C.B.A. suffix (version) number ③)**


LCD Drive C.B.A. suffix (version) number
LSJB3159-3
PbF

On running change basis :
1) LCD Drive C.B.A. suffix (version) number will be changed from ② to ③ to include the circuit of the LCD Drive Child C.B.A. onto the LCD Drive C.B.A.
2) The parts marked by ✱6 will be mounted on the LCD Drive C.B.A.

Ref. No.	Part Name	Step 1	Step 2	Step 3	
E111	LCD DRIVE CHILD C.B.A.	LSEP3185A	LSEP3185A	- - - - - - - -	✱3
R2059	MGF CHIP 1/16W 15K	- - - - - - - -	ERJ3GEYJ153V	ERJ3GEYJ153V	✱4
C2015	C CHIP 16V 0.1UF	ERJ3GEYJ153V	ECJ1VF1C104Z	ECJ1VF1C104Z	✱5
R2101	MGF CHIP 1/16W 27K	ERJ6GEYJ273V	ERJ3GEYJ273V	ERJ3GEYJ273V	
IC2304	IC, LIENAR	- - - - - - - -	- - - - - - - -	C0JBAB000619	✱6
C2327	C CHIP 16V 0.1UF	- - - - - - - -	- - - - - - - -	ECJ1VF1C104Z	
R2499	MGF CHIP 1/16W 0	- - - - - - - -	- - - - - - - -	ERJ3GEY0R00V	
R2590	MGF CHIP 1/16W 0	- - - - - - - -	- - - - - - - -	ERJ3GEY0R00V	
R2591	MGF CHIP 1/16W 0	- - - - - - - -	- - - - - - - -	ERJ3GEY0R00V	

NOTE:
For the details about ✱3~✱6, refer to the Schematic Diagram or the Circuit Board Layout.

12.2. INTERCONNECTION SCHEMATIC DIAGRAM

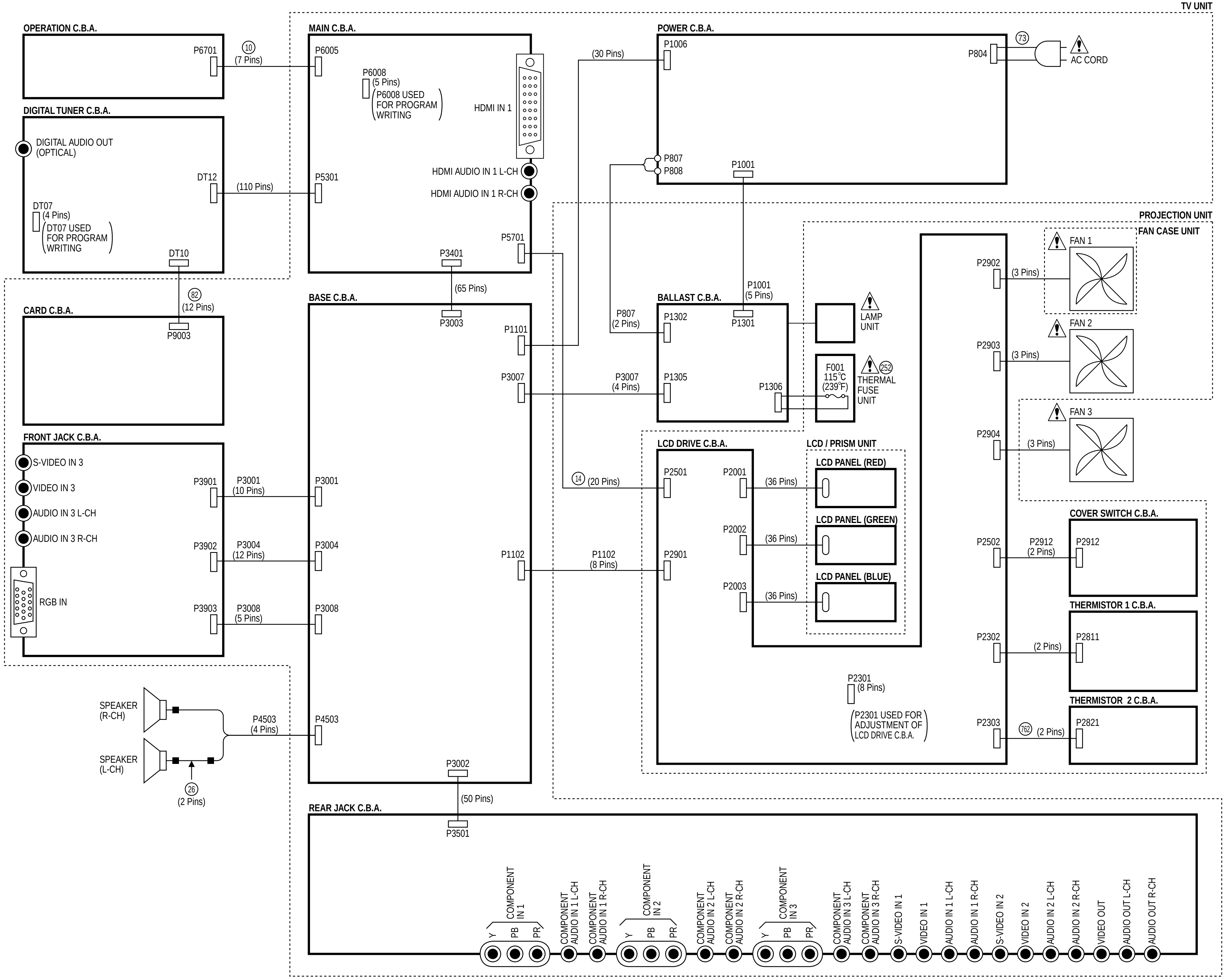
INTERCONNECTION SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

THERMAL FUSE UNIT REPLACEMENT NOTE:
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE NUMBER LSJA0464 (115°C).
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE NUMÉRO LSJA0464 (115°C)

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
THE LAMP UNIT IS NOT SUPPLIED AS A REPLACEMENT PART.
WHEN REPLACING, REPLACE THE LAMP UNIT WHICH IS
SUPPLIED AS A OPTIONAL ACCESSORY.


TV UNIT
OPERATION C.B.A.
P6701
⑩
(7 Pins)
MAIN C.B.A.
P6005
P6008
(5 Pins)
P6008 USED FOR PROGRAM WRITING
HDMI IN 1
HDMI AUDIO IN 1 L-CH
HDMI AUDIO IN 1 R-CH
P5301
P5701
P3401
(65 Pins)
DIGITAL TUNER C.B.A.
DIGITAL AUDIO OUT (OPTICAL)
DT12
(110 Pins)
DT07
(4 Pins)
DT07 USED FOR PROGRAM WRITING
DT10
(82)
(12 Pins)
P9003
CARD C.B.A.
POWER C.B.A.
P1006
(30 Pins)
P804
(73)
AC CORD
P807
P808
P1001
PROJECTION UNIT
FAN CASE UNIT
FAN 1
FAN 2
FAN 3
P2902
(3 Pins)
P2903
(3 Pins)
P2904
(3 Pins)
BASE C.B.A.
P3003
P1101
P3007
BALLAST C.B.A.
P807
(2 Pins)
P1302
P1001
(5 Pins)
P1301
LAMP UNIT
F001
115°C
(239°F)
(252)
THERMAL FUSE UNIT
P3007
(4 Pins)
P1305
P1306
FRONT JACK C.B.A.
S-VIDEO IN 3
VIDEO IN 3
AUDIO IN 3 L-CH
AUDIO IN 3 R-CH
RGB IN
P3901
P3001
(10 Pins)
P3001
P3902
P3004
(12 Pins)
P3004
P3903
P3008
(5 Pins)
P3008
LCD DRIVE C.B.A.
LCD / PRISM UNIT
⑭
(20 Pins)
P2501
P2001
(36 Pins)
LCD PANEL (RED)
P2002
(36 Pins)
LCD PANEL (GREEN)
P2003
(36 Pins)
LCD PANEL (BLUE)
P1102
P1102
(8 Pins)
P2901
COVER SWITCH C.B.A.
P2502
P2912
(2 Pins)
P2912
THERMISTOR 1 C.B.A.
P2302
(2 Pins)
P2811
THERMISTOR 2 C.B.A.
P2301
(8 Pins)
P2301 USED FOR ADJUSTMENT OF LCD DRIVE C.B.A.
P2303
(762)
(2 Pins)
P2821
SPEAKER (R-CH)
SPEAKER (L-CH)
㉖
(2 Pins)
P4503
(4 Pins)
P4503
P3002
(50 Pins)
REAR JACK C.B.A.
P3501
COMPONENT IN 1
Y
PB
PR
COMPONENT AUDIO IN 1 L-CH
COMPONENT AUDIO IN 1 R-CH
COMPONENT IN 2
Y
PB
PR
COMPONENT AUDIO IN 2 L-CH
COMPONENT AUDIO IN 2 R-CH
COMPONENT IN 3
Y
PB
PR
COMPONENT AUDIO IN 3 L-CH
COMPONENT AUDIO IN 3 R-CH
S-VIDEO IN 1
VIDEO IN 1
AUDIO IN 1 L-CH
AUDIO IN 1 R-CH
S-VIDEO IN 2
VIDEO IN 2
AUDIO IN 2 L-CH
AUDIO IN 2 R-CH
VIDEO OUT
AUDIO OUT L-CH
AUDIO OUT R-CH

INTERCONNECTION SCHEMATIC DIAGRAM

PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

12.3. MAIN SCHEMATIC DIAGRAMS

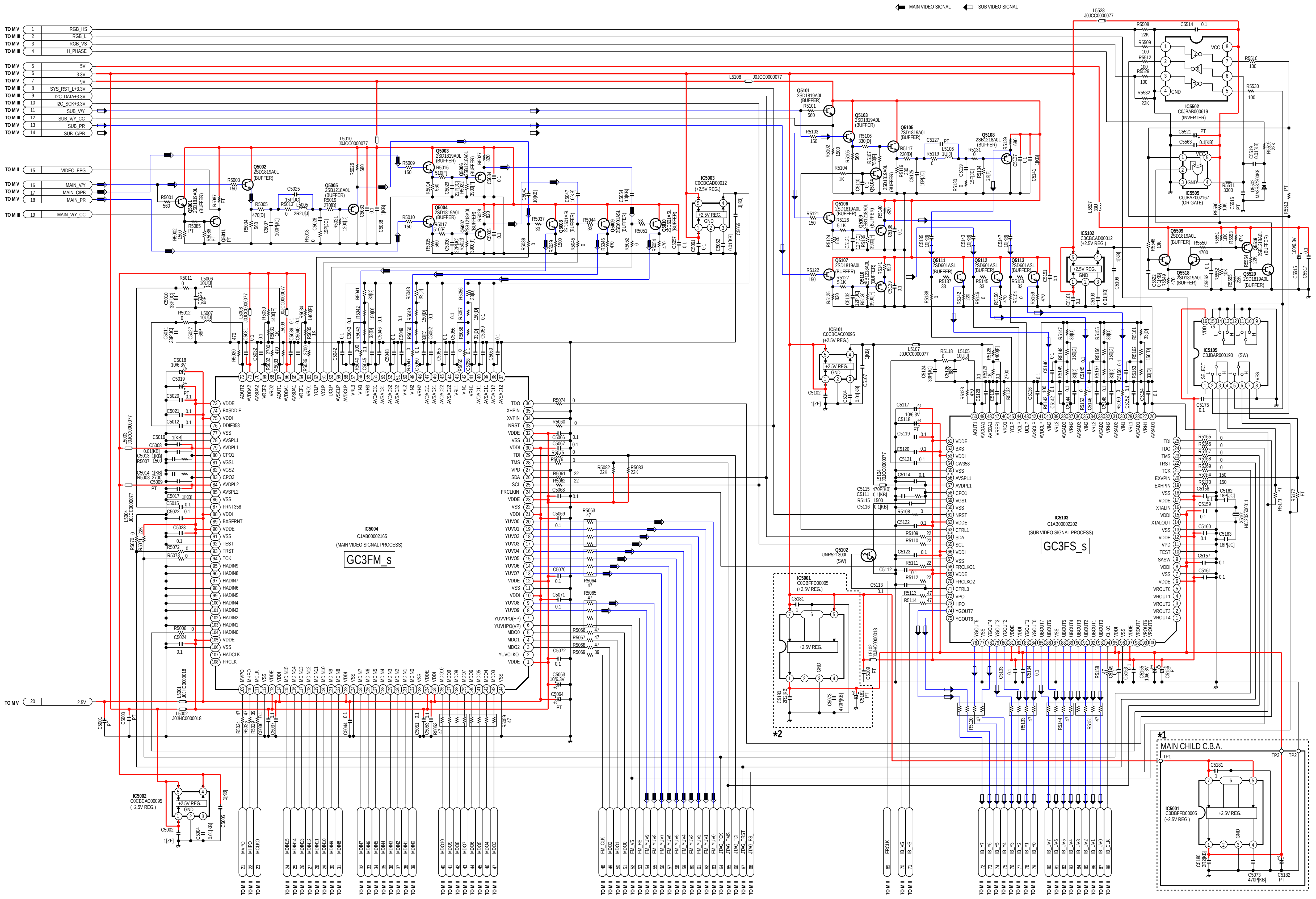
MAIN I SCHEMATIC DIAGRAM

⁎1, ⁎2: REFER TO MAIN C.B.A. REPLACEMENT NOTE OF SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES.

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

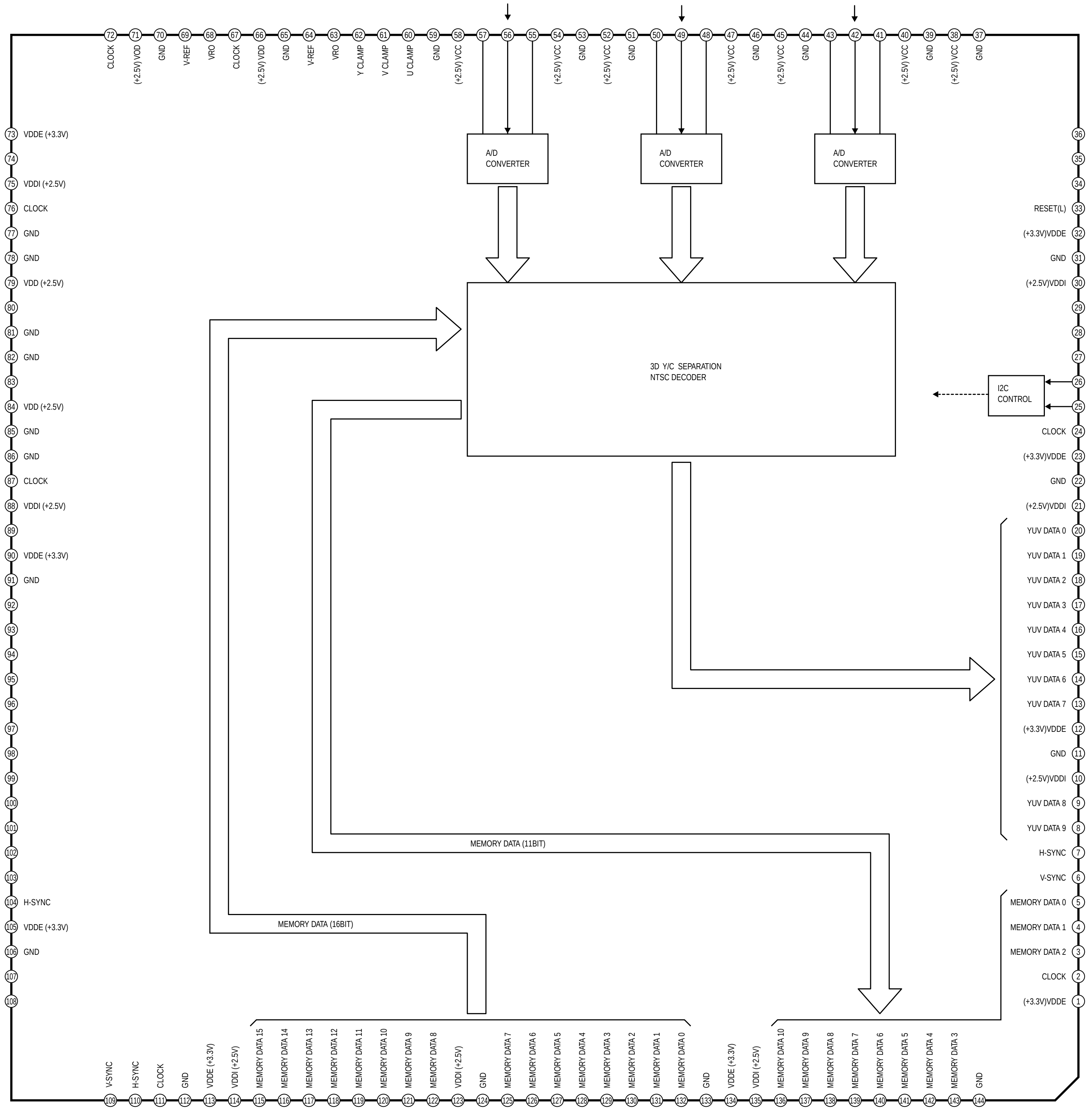
NOTE:
PARTS MARKED "PT" ARE NOT USED.


MAIN VIDEO SIGNAL
SUB VIDEO SIGNAL
TO M V
TO M III
TO M II
RGB_HS
RGB_L
RGB_VS
H_PHASE
5V
3.3V
9V
SYS_RST_L+3.3V
I2C_DATA+3.3V
I2C_SCK+3.3V
SUB_V/Y
SUB_V/Y_CC
SUB_PR
SUB_C/PB
VIDEO_EPG
MAIN_V/Y
MAIN_C/PB
MAIN_PR
MAIN_V/Y_CC
2.5V
IC5004
C1AB00002165
(MAIN VIDEO SIGNAL PROCESS)
GC3FM_s
IC5103
C1AB00002202
(SUB VIDEO SIGNAL PROCESS)
GC3FS_s
IC5003
C0CBCAD00012
(+2.5V REG.)
IC5101
C0CBCAC00095
(+2.5V REG.)
IC5102
C0CBCAD00012
(+2.5V REG.)
IC5002
C0CBCAC00095
(+2.5V REG.)
IC5001
C0DBFFD00005
(+2.5V REG.)
IC5502
C0JBAB000619
(INVERTER)
IC5505
C0JBAZ002167
(OR GATE)
IC5105
C0JBAR000190 (SW)
Q5102
UNR521300L
(SW)
⁎1
⁎2
MAIN CHILD C.B.A.
TP1
TP2
TP3

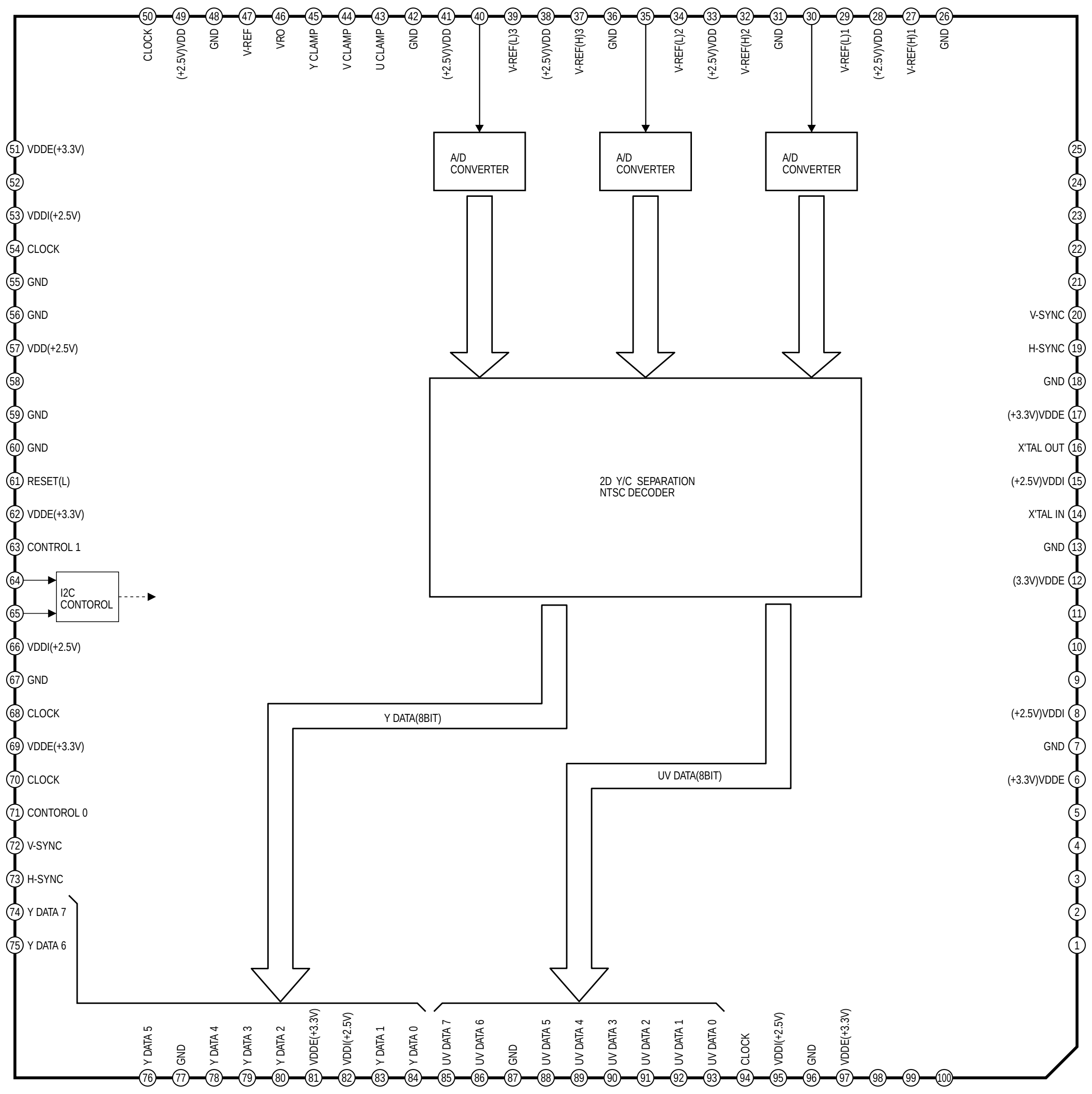
LINK TO VOLTAGE CHART

LSJB3150
MAIN I SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

IC5004 DETAIL BLOCK DIAGRAM


72 CLOCK
71 (+2.5V) VOD
70 GND
69 V-REF
68 VRO
67 CLOCK
66 (+2.5V) VDD
65 GND
64 V-REF
63 VRO
62 Y CLAMP
61 V CLAMP
60 U CLAMP
59 GND
58 (+2.5V) VCC
57
56
55
54 (+2.5V) VCC
53 GND
52 (+2.5V) VCC
51 GND
50
49
48
47 (+2.5V) VCC
46 GND
45 (+2.5V) VCC
44 GND
43
42
41
40 (+2.5V) VCC
39 GND
38 (+2.5V) VCC
37 GND
A/D CONVERTER
A/D CONVERTER
A/D CONVERTER
3D Y/C SEPARATION NTSC DECODER
I2C CONTROL
MEMORY DATA (11BIT)
MEMORY DATA (16BIT)
73 VDDE (+3.3V)
74
75 VDDI (+2.5V)
76 CLOCK
77 GND
78 GND
79 VDD (+2.5V)
80
81 GND
82 GND
83
84 VDD (+2.5V)
85 GND
86 GND
87 CLOCK
88 VDDI (+2.5V)
89
90 VDDE (+3.3V)
91 GND
92
93
94
95
96
97
98
99
100
101
102
103
104 H-SYNC
105 VDDE (+3.3V)
106 GND
107
108
RESET(L) 33
(+3.3V)VDDE 32
GND 31
(+2.5V)VDDI 30
36
35
34
29
28
27
26
25
CLOCK 24
(+3.3V)VDDE 23
GND 22
(+2.5V)VDDI 21
YUV DATA 0 20
YUV DATA 1 19
YUV DATA 2 18
YUV DATA 3 17
YUV DATA 4 16
YUV DATA 5 15
YUV DATA 6 14
YUV DATA 7 13
(+3.3V)VDDE 12
GND 11
(+2.5V)VDDI 10
YUV DATA 8 9
YUV DATA 9 8
H-SYNC 7
V-SYNC 6
MEMORY DATA 0 5
MEMORY DATA 1 4
MEMORY DATA 2 3
CLOCK 2
(+3.3V)VDDE 1
109 V-SYNC
110 H-SYNC
111 CLOCK
112 GND
113 VDDE (+3.3V)
114 VDDI (+2.5V)
115 MEMORY DATA 15
116 MEMORY DATA 14
117 MEMORY DATA 13
118 MEMORY DATA 12
119 MEMORY DATA 11
120 MEMORY DATA 10
121 MEMORY DATA 9
122 MEMORY DATA 8
123 VDDI (+2.5V)
124 GND
125 MEMORY DATA 7
126 MEMORY DATA 6
127 MEMORY DATA 5
128 MEMORY DATA 4
129 MEMORY DATA 3
130 MEMORY DATA 2
131 MEMORY DATA 1
132 MEMORY DATA 0
133 GND
134 VDDE (+3.3V)
135 VDDI (+2.5V)
136 MEMORY DATA 10
137 MEMORY DATA 9
138 MEMORY DATA 8
139 MEMORY DATA 7
140 MEMORY DATA 6
141 MEMORY DATA 5
142 MEMORY DATA 4
143 MEMORY DATA 3
144 GND

IC5103 DETAIL BLOCK DIAGRAM


50 CLOCK
49 (+2.5V)VDD
48 GND
47 V-REF
46 VRO
45 Y CLAMP
44 V CLAMP
43 U CLAMP
42 GND
41 (+2.5V)VDD
40
39 V-REF(L)3
38 (+2.5V)VDD
37 V-REF(H)3
36 GND
35
34 V-REF(L)2
33 (+2.5V)VDD
32 V-REF(H)2
31 GND
30
29 V-REF(L)1
28 (+2.5V)VDD
27 V-REF(H)1
26 GND
A/D CONVERTER
A/D CONVERTER
A/D CONVERTER
2D Y/C SEPARATION NTSC DECODER
I2C CONTOROL
Y DATA(8BIT)
UV DATA(8BIT)
51 VDDE(+3.3V)
52
53 VDDI(+2.5V)
54 CLOCK
55 GND
56 GND
57 VDD(+2.5V)
58
59 GND
60 GND
61 RESET(L)
62 VDDE(+3.3V)
63 CONTROL 1
64
65
66 VDDI(+2.5V)
67 GND
68 CLOCK
69 VDDE(+3.3V)
70 CLOCK
71 CONTOROL 0
72 V-SYNC
73 H-SYNC
74 Y DATA 7
75 Y DATA 6
25
24
23
22
21
V-SYNC 20
H-SYNC 19
GND 18
(+3.3V)VDDE 17
X'TAL OUT 16
(+2.5V)VDDI 15
X'TAL IN 14
GND 13
(3.3V)VDDE 12
11
10
9
(+2.5V)VDDI 8
GND 7
(+3.3V)VDDE 6
5
4
3
2
1
76 Y DATA 5
77 GND
78 Y DATA 4
79 Y DATA 3
80 Y DATA 2
81 VDDE(+3.3V)
82 VDDI(+2.5V)
83 Y DATA 1
84 Y DATA 0
85 UV DATA 7
86 UV DATA 6
87 GND
88 UV DATA 5
89 UV DATA 4
90 UV DATA 3
91 UV DATA 2
92 UV DATA 1
93 UV DATA 0
94 CLOCK
95 VDDI(+2.5V)
96 GND
97 VDDE(+3.3V)
98
99
100

IC5004 DETAIL BLOCK DIAGRAM
IC5103 DETAIL BLOCK DIAGRAM

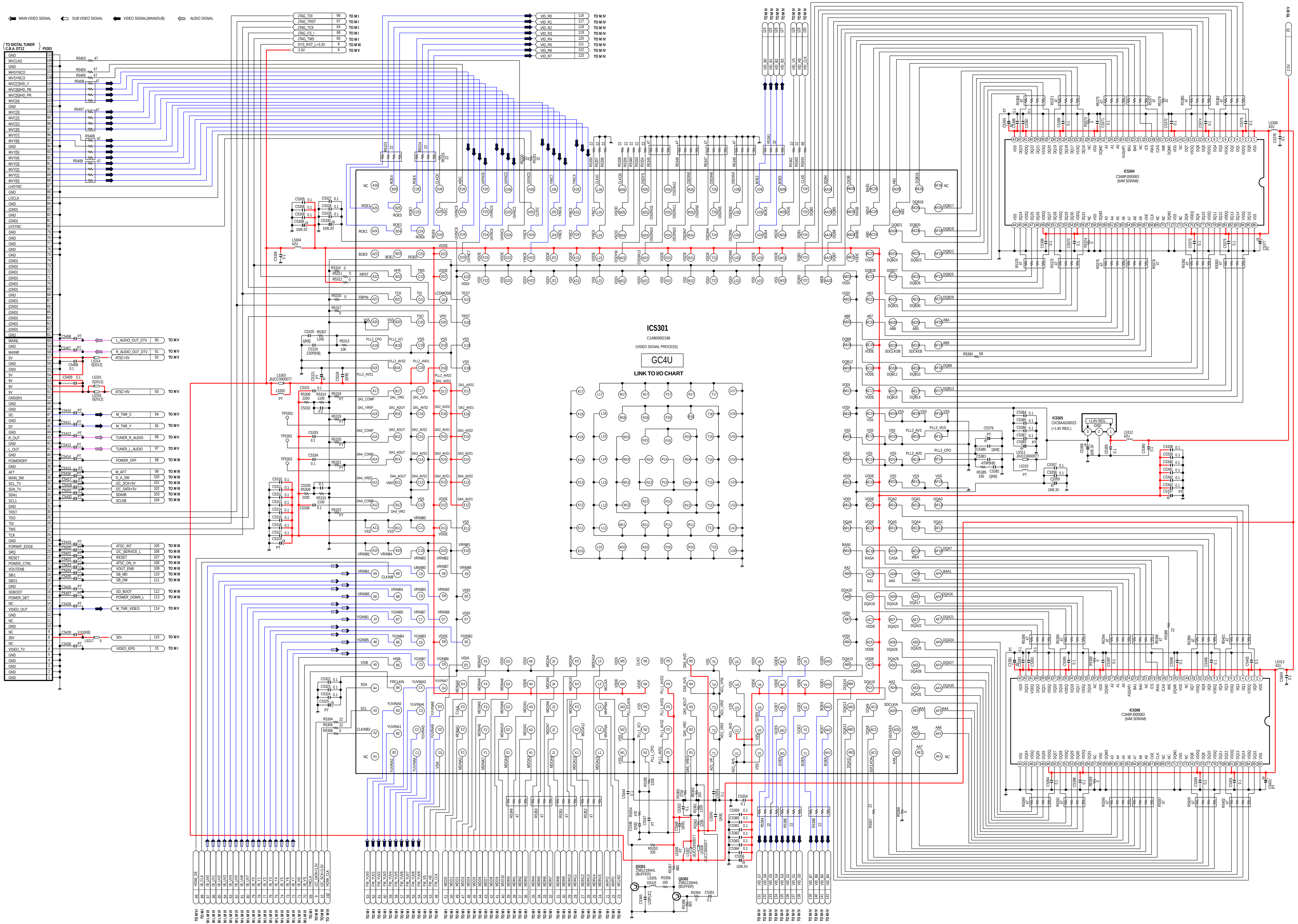
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

MAIN II SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.


MAIN VIDEO SIGNAL
SUB VIDEO SIGNAL
VIDEO SIGNAL(MAIN/SUB)
AUDIO SIGNAL
TO DIGITAL TUNER C.B.A. DT12
PS301
IC5301
C1AB00002186
(VIDEO SIGNAL PROCESS)
GC4U
LINK TO I/O CHART
IC5304
C3ABPJ000063
(64M SDRAM)
IC5306
C3ABPJ000063
(64M SDRAM)
IC5305
C0CBAAG00023
(+1.8V REG.)
Q5301
2SB1218AHL
(BUFFER)
Q5302
2SB1218AHL
(BUFFER)
TO M I
TO M V
TO M III

LINK TO VOLTAGE CHART

LSJB3150

MAIN II SCHEMATIC DIAGRAM

PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

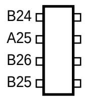
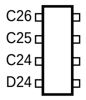
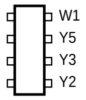
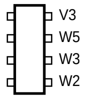
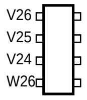
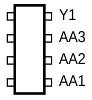
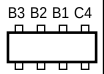
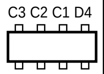
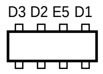
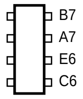
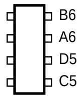
I/O CHART OF IC5301 (1/2)

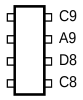
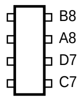
Pin No.	I/O	Signal Name	Description
A1	-	NC	(Not used)
A2	I	CLKINB2	HDMI CLOCK
A3	I	SCL	I2C SERIAL CLOCK
A4	I	SDA	I2C SERIAL DATA
A5	I	VSIB	V-SYNC
A6	I	YGINB5	Y DATA5
A7	I	YGINB1	Y DATA1
A8	I	VRINB5	UV DATA5
A9	I	VRINB1	UV DATA1
A10	-	VRINB5	(Not used)
A11	-	VSS	GND
A12	-	DA4_COMP	D/A4 COMP
A13	I	DA4_VREF	V-REF FOR D/A4
A14	-	DA4_COMP	D/A3 COMP
A15	-	DA2_COMP	D/A2 COMP
A16	I	DA1_VREF	V-REF FOR D/A1
A17	-	DA1_COMP	D/A1 COMP
A18	-	PLL2_AVS1	GND
A19	O	PLL2_CPO	PLL2 PHASE COMP
A20	-	VSS	GND
A21	-	FBPIN	(Not used)
A22	I	NRST	RESET(L)
A23	-	BOE0	(Not used)
A24	-	ROE1	(Not used)
A25	O	ROE3	R DATA1
A26	-	NC	(Not used)
B1	I	YUVINA2	YUV DATA2
B2	I	YUVINA1	YUV DATA1
B3	I	YUVINA0	YUV DATA0
B4	I	FRCLKIN	CLOCK FROM IC5103(GC3FS)
B5	I	HSIB	H-SYNC
B6	I	YGINB4	Y DATA4
B7	I	YGINB0	Y DATA0
B8	I	VRINB4	UV DATA4
B9	I	CLKINB	CLOCK FROM IC5103 (GC3FS)
B10	-	VRINB4	(Not used)
B11	-	VSS	GND
B12	-	DA4_VRO	(Not used)
B13	-	DA4_AOUT	(Not used)
B14	-	DA3_AOUT	(Not used)
B15	-	DA2_AOUT	(Not used)
B16	-	DA1_AOUT	(Not used)
B17	-	DA1_VRO	(Not used)
B18	-	PLL2_AVS2	GND
B19	I	PLL2_VCI	PLL OSC CONTROL
B20	-	VSS	GND
B21	I	TCK	TEST CLOCK
B22	-	HFR	(Not used)
B23	-	BOE1	(Not used)
B24	O	ROE2	R DATA0
B25	O	ROE5	R DATA3
B26	O	ROE4	R DATA2
C1	I	YUVINA6	YUV DATA6
C2	I	YUVINA5	YUV DATA5
C3	I	YUVINA4	YUV DATA4
C4	I	YUVINA3	YUV DATA3
C5	I	YGINB7	Y DATA7
C6	I	YGINB3	Y DATA3
C7	I	VRINB7	UV DATA7
C8	I	VRINB3	UV DATA3
C9	I	UBINB0	UV DATA0
C10	I	VRINB3	ENB FROM HDMI
C11	-	VRINB0	(Not used)
C12	-	VSS	GND
C13	-	DA4_AVS2	GND
C14	-	DA3_AVS2	GND
C15	-	DA2_AVS2	GND
C16	-	DA1_AVS2	GND
C17	-	DA1_AVS1	GND
C18	I	PLL2_AVD1	VDD(+3.3V)
C19	-	VSS	GND
C20	O	TDO	TEST DATA
C21	I	TDI	TEST DATA
C22	I	TMS	TEST MODE SELECT
C23	-	ROE0	(Not used)
C24	O	ROE8	R DATA6
C25	O	ROE7	R DATA5
C26	O	ROE6	R DATA4
D1	I	VSIA	V-SYNC
D2	I	YUVINA9	YUV DATA9
D3	I	YUVINA8	YUV DATA8
D4	I	YUVINA7	YUV DATA7
D5	I	YGINB6	Y DATA6
D6	I	VDDE	VDD(+3.3V)
D7	I	VRINB6	UV DATA6
D8	I	VRINB2	UV DATA2
D9	-	VRINB7	(Not used)
D10	-	VRINB2	(Not used)
D11	I	VDDE	VDD(+3.3V)
D12	I	VDDE	VDD(+3.3V)
D13	-	DA4_AVS1	GND
D14	-	DA3_AVS1	GND
D15	-	DA2_AVS1	GND
D16	I	DA2_AVD2	VDD(+3.3V)
D17	I	DA1_AVD1	VDD(+3.3V)
D18	I	PLL2_AVD2	VDD(+3.3V)
D19	-	VSS	GND
D20	-	VPD	(Not used)
D21	-	LCDMODE	(Not used)
D22	I	VDDE	VDD(+3.3V)
D23	I	VDDE	VDD(+3.3V)
D24	O	ROE9	R DATA7
D25	I	VSIC	V-SYNC
D26	O	CLKOC	CLOCK
E1	I	MDINA2	MEMORY DATA2 FROM IC5004(GC3FM)
E2	I	MDINA1	MEMORY DATA1 FROM IC5004(GC3FM)
E3	I	CLKA	27MHZ CLOCK
E4	I	MDINA0	MEMORY DATA0 FROM IC5004(GC3FM)
E5	I	HSIA	H-SYNC
E6	I	YGINB2	Y DATA2
E7	I	VDDI	VDD(+1.8V)
E8	I	VDDI	VDD(+1.8V)
E9	-	VRINB6	(Not used)
E10	-	VRINB1	(Not used)
E11	-	VSS	GND
E12	I	DA4_AVD1	VDD(+3.3V)
E13	I	DA4_AVD2	VDD(+3.3V)
E14	I	DA3_AVD1	VDD(+3.3V)
E15	I	DA3_AVD2	VDD(+3.3V)
E16	I	DA2_AVD1	VDD(+3.3V)
E17	I	DA1_AVD2	VDD(+3.3V)
E18	-	VSS	GND
E19	-	VSS	GND
E20	I	TRST	TEST RESET
E21	-	TEST	(Not used)
E22	I	VDDE	VDD(+3.3V)
E23	I	UVINC7	C DATA 5
E24	I	UNINC8	C DATA 6
E25	I	UVINC9	C DATA 7
E26	I	HSIC	H-SYNC
F1	I	MDINA7	MEMORY DATA7 FROM IC5004(GC3FM)
F2	I	MDINA6	MEMORY DATA6 FROM IC5004(GC3FM)
F3	I	MDINA5	MEMORY DATA5 FROM IC5004(GC3FM)
F4	I	MDINA4	MEMORY DATA4 FROM IC5004(GC3FM)
F5	I	MDINA3	MEMORY DATA3 FROM IC5004(GC3FM)
F22	-	VSS	GND
F23	I	VDDE	VDD(+3.3V)
F24	I	UVINC4	C DATA 2
F25	I	UVINC5	C DATA 3
F26	I	UVINC6	C DATA 4
G1	O	MDOA0	MEMORY DATA0 TO IC5004(GC3FM)
G2	I	MDINA10	MEMORY DATA10 FROM IC5004(GC3FM)
G3	I	MDINA9	MEMORY DATA9 FROM IC5004(GC3FM)
G4	I	MDINA8	MEMORY DATA8 FROM IC5004(GC3FM)
G5	I	VDDI	VDD(+1.8V)
G22	-	VSS	GND
G23	I	VDDE	VDD(+3.3V)
G24	I	UVINC1	V-SYNC
G25	I	UVINC2	C DATA 0
G26	I	UVINC3	C DATA 1
H1	O	MDOA3	MEMORY DATA3 TO IC5004(GC3FM)
H2	O	MDOA2	MEMORY DATA2 TO IC5004(GC3FM)
H3	O	MDOA1	MEMORY DATA1 TO IC5004(GC3FM)
H4	I	VDDE	VDD(+3.3V)
H5	I	VDDI	VDD(+1.8V)
H22	I	VDDI	VDD(+1.8V)
H23	I	YINC8	Y DATA 6
H24	I	YINC9	Y DATA 7
H25	I	CLKIC	CLOCK
H26	I	UVINC0	H-SYNC
J1	O	MDOA8	MEMORY DATA8 TO IC5004(GC3FM)
J2	O	MDOA7	MEMORY DATA7 TO IC5004(GC3FM)
J3	O	MDOA6	MEMORY DATA6 TO IC5004(GC3FM)
J4	O	MDOA5	MEMORY DATA5 TO IC5004(GC3FM)
J5	O	MDOA4	MEMORY DATA4 TO IC5004(GC3FM)
J22	I	VDDI	VDD(+1.8V)
J23	I	VDDE	VDD(+3.3V)
J24	I	YINC5	Y DATA 3
J25	I	YINC6	Y DATA 4
J26	I	YINC7	Y DATA 5
K1	O	MDOA13	MEMORY DATA13 TO IC5004(GC3FM)
K2	O	MDOA12	MEMORY DATA12 TO IC5004(GC3FM)
K3	O	MDOA11	MEMORY DATA11 TO IC5004(GC3FM)
K4	O	MDOA10	MEMORY DATA10 TO IC5004(GC3FM)
K5	O	MDOA9	MEMORY DATA9 TO IC5004(GC3FM)
K10	-	VSS	GND
K11	-	VSS	GND
K12	-	VSS	GND
K13	-	VSS	GND
K14	-	VSS	GND
K15	-	VSS	GND
K16	-	VSS	GND
K17	-	VSS	GND
K22	-	VSS	GND
K23	I	VDDE	VDD(+3.3V)
K24	I	YINC2	Y DATA 0
K25	I	YINC3	Y DATA 1
K26	I	YINC4	Y DATA 2
L1	O	MDOA15	MEMORY DATA15 TO IC5004(GC3FM)
L2	I	MVPINA	V-SYNC FROM IC5004(GC3FM)
L3	I	MHPINA	H-SYNC FROM IC5004(GC3FM)
L4	I	MCLKA	CLOCK FROM IC5004(GC3FM)
L5	O	MDOA14	MEMORY DATA14 TO IC5004(GC3FM)
L10	-	VSS	GND
L11	-	VSS	GND
L12	-	VSS	GND
L13	-	VSS	GND
L14	-	VSS	GND
L15	-	VSS	GND
L16	-	VSS	GND
L17	-	VSS	GND
L22	-	VSS	GND
L23	-	VDDE	VDD(+3.3V)
L24	-	YINC0	(Not used)
L25	-	YINC1	(Not used)
L26	-	CLKID	(Not used)
M1	-	VSS	GND
M2	-	VSS	GND
M3	I	PLL1CLKIN	PLL1 CLOCK
M4	I	VDDE	VDD(+3.3V)
M5	I	VDDI	VDD(+1.8V)
M10	-	VSS	GND
M11	-	VSS	GND
M12	-	VSS	GND
M13	-	VSS	GND
M14	-	VSS	GND
M15	-	VSS	GND
M16	-	VSS	GND
M17	-	VSS	GND
M22	I	VDDI	VDD(+1.8V)
M23	-	OSDYM	(Not used)
M24	-	VSOD	(Not used)
M25	-	HSOD	(Not used)
M26	-	CLKOD	(Not used)
N1	O	PLL1_CPO	PLL1 PHASE COMP
N2	I	PLL1_VCI	PLL1 OSC CONTROL
N3	-	VSS	GND
N4	I	VEED	VDD(+3.3V)
N5	-	CLKO	(Not used)
N10	-	VSS	GND
N11	-	VSS	GND
N12	-	VSS	GND
N13	-	VSS	GND
N14	-	VSS	GND
N15	-	VSS	GND
N16	-	VSS	GND
N17	-	VSS	GND
N22	I	VDDI	VDD(+1.8V)
N23	-	OSDIN13	(Not used)
N24	-	OSDIN14	(Not used)
N25	-	OSDIN15	(Not used)
N26	-	OSDYS	(Not used)
P1	-	PLL1_AVS	GND
P2	-	PLL1_AVS2	GND
P3	I	PLL1_AVD1	VDD(+3.3V)
P4	I	PLL1_AVD2	VDD(+3.3V)
P5	-	VSS	GND
P10	-	VSS	GND
P11	-	VSS	GND
P12	-	VSS	GND
P13	-	VSS	GND
P14	-	VSS	GND
P15	-	VSS	GND
P16	-	VSS	GND
P17	-	VSS	GND
P22	-	VSS	GND
P23	I	VDDE	VDD(+3.3V)
P24	-	OSDIN10	(Not used)
P25	-	OSDIN11	(Not used)
P26	-	OSDIN12	(Not used)

I/O CHART OF IC5301 (2/2)

Pin No.	I/O	Signal Name	Description
R1	I	DA5_VREF	V-REF FOR D/A 5
R2	O	DA5_VRO	V-REF
R3	O	DA5_AOUT	CLOCK
R4	-	DA5_AVS	GND
R5	I	DA5_AVD	VDD(+3.3V)
R10	-	VSS	GND
R11	-	VSS	GND
R12	-	VSS	GND
R13	-	VSS	GND
R14	-	VSS	GND
R15	-	VSS	GND
R16	-	VSS	GND
R17	-	VSS	GND
R22	-	VSS	GND
R23	I	VDDE	VDD(+3.3V)
R24	-	OSDIN7	(Not used)
R25	-	OSDIN8	(Not used)
R26	-	OSDIN9	(Not used)
T1	O	AD1_VR	V-REF
T2	-	AD1_VIN3	(Not used)
T3	-	AD1_VIN2	(Not used)
T4	-	AD1_VIN1	(Not used)
T5	-	VSS	GND
T10	-	VSS	GND
T11	-	VSS	GND
T12	-	VSS	GND
T13	-	VSS	GND
T14	-	VSS	GND
T15	-	VSS	GND
T16	-	VSS	GND
T17	-	VSS	GND
T22	I	VDDI	VDD(+1.8V)
T23	I	VDDE	VDD(+3.3V)
T24	-	OSDIN4	(Not used)
T25	-	OSDIN5	(Not used)
T26	-	OSDIN6	(Not used)
U1	-	AD1_AVS	GND
U2	I	AD1_AVD	VDD(+3.3V)
U3	-	VSS	GND
U4	-	VSS	GND
U5	I	VDDI	VDD(+1.8V)
U10	-	VSS	GND
U11	-	VSS	GND
U12	-	VSS	GND
U13	-	VSS	GND
U14	-	VSS	GND
U15	-	VSS	GND
U16	-	VSS	GND
U17	-	VSS	GND
U22	I	VDDI	VDD(+1.8V)
U23	-	OSDIN0	(Not used)
U24	-	OSDIN1	(Not used)
U25	-	OSDIN2	(Not used)
U26	-	OSDIN3	(Not used)
V1	-	VSS	GND
V2	-	VSS	GND
V3	O	GOE9	G DATA 7
V4	I	VDDE	VDD(+3.3V)
V5	I	VDDI	VDD(+1.8V)
V22	-	VSS	GND
V23	I	VDDE	VDD(+3.3V)
V24	O	BOE4	B DATA 2
V25	O	BOE3	B DATA 1
V26	O	BOE2	B DATA 0
W1	O	GOE5	G DATA 3
W2	O	GOE6	G DATA 4
W3	O	GOE7	G DATA 5
W4	I	VDDE	VDD(+3.3V)
W5	O	GOE8	G DATA 6
W22	-	VSS	GND
W23	I	VDDE	VDD(+3.3V)
W24	O	HSOE	H-SYNC
W25	O	VSOE	V-SYNC
W26	O	BOE5	B DATA 3
Y1	O	BOE9	B DATA 7
Y2	O	GOE2	G DATA 0
Y3	O	GOE3	G DATA 1
Y4	I	VDDE	VDD(+3.3V)
Y5	O	GOE4	G DATA 2
Y22	I/O	DQB3	SDRAM DATA 3 OF IC5304
Y23	I/O	DQB2	SDRAM DATA 2 OF IC5304
Y24	I/O	DQB1	SDRAM DATA 1 OF IC5304
Y25	I/O	DQB0	SDRAM DATA 0 OF IC5304
Y26	O	CLKE	CLOCK
AA1	O	BOE6	B DATA 4
AA2	O	BOE7	B DATA 5
AA3	O	BOE8	B DATA 6
AA4	-	GOE1	(Not used)
AA5	-	GOE0	(Not used)
AA22	O	WEB	WRITE ENABLE OF IC5304
AA23	I/O	DQB7	SDRAM DATA 7 OF IC5304
AA24	I/O	DQB6	SDRAM DATA 6 OF IC5304
AA25	I/O	DQB5	SDRAM DATA 5 OF IC5304
AA26	I/O	DQB4	SDRAM DATA 4 OF IC5304
AB1	I/O	DQA11	SDRAM DATA 11 OF IC5306
AB2	I/O	DQA12	SDRAM DATA 12 OF IC5306
AB3	I/O	DQA13	SDRAM DATA 13 OF IC5306
AB4	I/O	DQA14	SDRAM DATA 14 OF IC5306
AB5	I/O	DQA15	SDRAM DATA 15 OF IC5306
AB6	I	VDDI	VDD(+1.8V)
AB7	I	VDDI	VDD(+1.8V)
AB8	I/O	DQA20	SDRAM DATA 20 OF IC5306
AB9	O	AA2	SDRAM ADDRESS 2 OF IC5306
AB10	O	BAA0	BANK SELECT 1 OF IC5306
AB11	I/O	DQA6	SDRAM DATA 6 OF IC5306
AB12	I	VDDI	VDD(+1.8V)
AB13	I	VDDI	VDD(+1.8V)
AB14	-	VSS	GND
AB15	-	VSS	GND
AB16	I	VDDI	VDD(+1.8V)
AB17	I	VDDI	VDD(+1.8V)
AB18	I/O	DQB12	SDRAM DATA 12 OF IC5304
AB19	I/O	DQB8	SDRAM DATA 8 OF IC5304
AB20	O	AB8	SDRAM ADDRESS 8 OF IC5304
AB21	I	VDDI	VDD(+1.8V)
AB22	I	VDDI	VDD(+1.8V)
AB23	I	VDDE	VDD(+3.3V)
AB24	O	BAB0	BANK SELECT 0 OF IC5304
AB25	O	RASB	ROAD ADDRESS STROBE OF IC5304
AB26	O	CASB	CURUMN ADDRESS STROBE OF IC5304
AC1	O	SDCLKOA	SDRAM CLOCK OF IC5306
AC2	I/O	DQA8	SDRAM DATA 8 OF IC5306
AC3	I/O	DQA9	SDRAM DATA 9 OF IC5306
AC4	I/O	DQA10	SDRAM DATA 10 OF IC5306
AC5	I	VDDE	VDD(+3.3V)
AC6	I	VDDE	VDD(+3.3V)
AC7	I	VDDE	VDD(+3.3V)
AC8	I/O	DQA19	SDRAM DATA 19 OF IC5306
AC9	O	AA1	SDRAM ADDRESS 1 OF IC5306
AC10	O	RASA	ROAD ADDRESS STROBE OF IC5304
AC11	I	VDDE	VDD(+3.3V)
AC12	I	VDDE	VDD(+3.3V)
AC13	I	VDDE	VDD(+3.3V)
AC14	-	VSS	GND
AC15	-	VSS	GND
AC16	-	VSS	GND
AC17	I	VDDE	VDD(+3.3V)
AC18	I	VDDE	VDD(+3.3V)
AC19	I	VDDE	VDD(+3.3V)
AC20	O	AB7	SDRAM ADDRESS 7 OF IC5304
AC21	O	AB3	SDRAM ADDRESS 3 OF IC5304
AC22	I/O	DQB28	SDRAM DATA 28 OF IC5304
AC23	I	VDDE	VDD(+3.3V)
AC24	O	AB0	SDRAM ADDRESS 0 OF IC5304
AC25	O	AB10	SDRAM ADDRESS 10 OF IC5304
AC26	O	BAB1	BANK SELECT 1 OF IC5304
AD1	O	AA9	SDRAM ADDRESS 9 OF IC5306
AD2	O	SDCKEA	SDRAM CKE OF IC5306
AD3	-	SDCLKIA	(Not used)
AD4	O	AA3	SDRAM ADDRESS 3 OF IC5306
AD5	I/O	DQA29	SDRAM DATA 29 OF IC5306
AD6	I/O	DQA26	SDRAM DATA 26 OF IC5306
AD7	I/O	DQA23	SDRAM DATA 23 OF IC5306
AD8	I/O	DQA18	SDRAM DATA 18 OF IC5306
AD9	O	AA0	SDRAM ADDRESS 0 OF IC5306
AD10	O	CASA	CURUMN ADDRESS STROBE OF IC5306
AD11	I/O	DQA5	SDRAM DATA 5 OF IC5306
AD12	I/O	DQA2	SDRAM DATA 2 OF IC5306
AD13	-	VSS	GND
AD14	-	VSS	GND
AD15	-	VSS	GND
AD16	-	VSS	GND
AD17	I/O	DQB15	SDRAM DATA 15 OF IC5304
AD18	I/O	DQB11	SDRAM DATA 11 OF IC5304
AD19	O	SDCLKOB	SDRAM CLOCK OF IC5304
AD20	O	AB6	SDRAM ADDRESS 6 OF IC5304
AD21	I/O	DQB31	SDRAM DATA 31 OF IC5304
AD22	I/O	DQB27	SDRAM DATA 27 OF IC5304
AD23	I/O	DQB24	SDRAM DATA 24 OF IC5304
AD24	I/O	DQB21	SDRAM DATA 21 OF IC5304
AD25	O	AB2	SDRAM ADDRESS 2 OF IC5304
AD26	O	AB1	SDRAM ADDRESS 1 OF IC5304
AE1	O	AA7	SDRAM ADDRESS 7 OF IC5306
AE2	O	AA8	SDRAM ADDRESS 8 OF IC5306
AE3	O	AA5	SDRAM ADDRESS 5 OF IC5306
AE4	I/O	DQA31	SDRAM DATA 31 OF IC5306
AE5	I/O	DQA28	SDRAM DATA 28 OF IC5306
AE6	I/O	DQA25	SDRAM DATA 25 OF IC5306
AE7	I/O	DQA22	SDRAM DATA 22 OF IC5306
AE8	I/O	DQA17	SDRAM DATA 17 OF IC5306
AE9	O	AA10	SDRAM ADDRESS 10 OF IC5306
AE10	O	WEA	WRITE ENABLE OF IC5306
AE11	I/O	DQA4	SDRAM DATA 4 OF IC5306
AE12	I/O	DQA1	SDRAM DATA 1 OF IC5306
AE13	-	VSS	GND
AE14	I	PLL3_AVD	VDD(+1.8V)
AE15	-	PLL3_AVS	GND
AE16	-	VSS	GND
AE17	I/O	DQB14	SDRAM DATA 14 OF IC5304
AE18	I/O	DQB10	SDRAM DATA 10 OF IC5304
AE19	O	SDCEKEB	SDRAM CKE OF IC5304
AE20	O	AB5	SDRAM ADDRESS 5 OF IC5304
AE21	I/O	DQB30	SDRAM DATA 30 OF IC5304
AE22	I/O	DQB26	SDRAM DATA 26 OF IC5304
AE23	I/O	DQB23	SDRAM DATA 23 OF IC5304
AE24	I/O	DQB20	SDRAM DATA 20 OF IC5304
AE25	I/O	DQB18	SDRAM DATA 18 OF IC5304
AE26	I/O	DQB16	SDRAM DATA 16 OF IC5304
AF1	-	NC	(Not used)
AF2	O	AA6	SDRAM ADDRESS 6 OF IC5306
AF3	O	AA4	SDRAM ADDRESS 4 OF IC5306
AF4	I/O	DQA30	SDRAM DATA 30 OF IC5306
AF5	I/O	DQA27	SDRAM DATA 27 OF IC5306
AF6	I/O	DQA24	SDRAM DATA 24 OF IC5306
AF7	I/O	DQA21	SDRAM DATA 21 OF IC5306
AF8	I/O	DQA16	SDRAM DATA 16 OF IC5306
AF9	O	BAA1	BANK SELECT 1 OF IC5306
AF10	I/O	DQA7	SDRAM DATA 7 OF IC5306
AF11	I/O	DQA3	SDRAM DATA 3 OF IC5306
AF12	I/O	DQA0	SDRAM DATA 0 OF IC5306
AF13	-	VSS	GND
AF14	O	PLL3_VCPO	PLL3 PHASE COMP.
AF15	-	PLL3_VGS	GND
AF16	-	VSS	GND
AF17	I/O	DQB13	SDRAM DATA 13 OF IC5304
AF18	I/O	DQB9	SDRAM DATA 9 OF IC5304
AF19	O	AB9	SDRAM ADDRESS 9 OF IC5304
AF20	O	AB4	SDRAM ADDRESS 4 OF IC5304
AF21	I/O	DQB29	SDRAM DATA 29 OF IC5304
AF22	I/O	DQB25	SDRAM DATA 25 OF IC5304
AF23	I/O	DQB22	SDRAM DATA 22 OF IC5304
AF24	I/O	DQB19	SDRAM DATA 19 OF IC5304
AF25	I/O	DQB17	SDRAM DATA 17 OF IC5304
AF26	-	NC	(Not used)

CHECKING POINT OF IC5301

Pin	Name	Voltage	Check Point	WF No.	Remarks
B24	ROE2	0.7	R5323 (LEFT) 	WF94	COMPONENT SIDE
A25	ROE3	0.7			
B26	ROE4	1.0			
B25	ROE5	0.4			
C26	ROE6	2.9	R5324 (LEFT) 		COMPONENT SIDE
C25	ROE7	0.7			
C24	ROE8	1.0			
D24	ROE9	1.1			
Y2	GOE2	0.7	R5365 (RIGHT) 	WF95	COMPONENT SIDE
Y3	GOE3	0.9			
Y5	GOE4	0.6			
W1	GOE5	1.0			
W2	GOE6	0.7	R5364 (RIGHT) 		COMPONENT SIDE
W3	GOE7	0.9			
W5	GOE8	0.8			
V3	GOE9	1.2			
V26	BOE2	0.9	R5341 (LEFT) 	WF96	COMPONENT SIDE
V25	BOE3	0.8			
V24	BOE4	1.1			
W26	BOE5	0.5			
AA1	BOE6	0.9	R5366 (RIGHT) 		COMPONENT SIDE
AA2	BOE7	1.3			
AA3	BOE8	0.9			
Y1	BOE9	1.2			
B3	YUVINA0	1.1	R5063 (UPPER) 	WF46	COMPONENT SIDE
B2	YUVINA1	1.1			
B1	YUVINA2	0.9			
C4	YUVINA3	0.9			
C3	YUVINA4	1.0	R5064 (UPPER) 		COMPONENT SIDE
C2	YUVINA5	0.9			
C1	YUVINA6	0.8			
D4	YUVINA7	0.8			
D3	YUVINA8	1.2	R5065 (UPPER) 		COMPONENT SIDE
D2	YUVINA9	0.8			
E5	HSIA	0.1		WF11	
D1	VSIA	0.1		WF10	
B7	YGINB0	1.9	R5133 (RIGHT) 	WF35	COMPONENT SIDE
A7	YGINB1	2.0			
E6	YGINB2	2.0			
C6	YGINB3	2.7			
B6	YGINB4	2.2	R5120 (RIGHT) 		COMPONENT SIDE
A6	YGINB5	2.2			
D5	YGINB6	1.3			
C5	YGINB7	1.0			

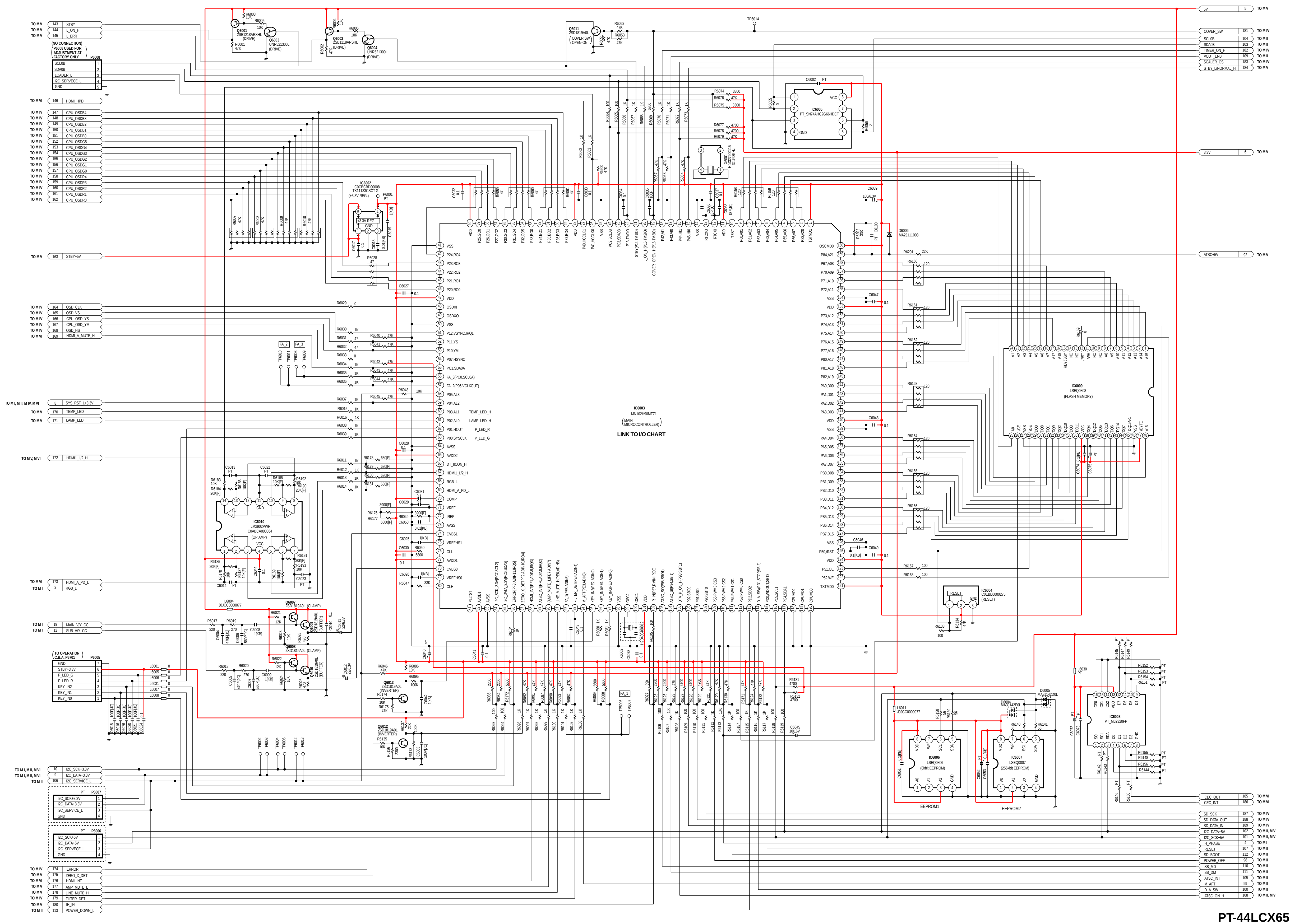
Pin	Name	Voltage	Check Point	WF No.	Remarks
C9	UBINB0	1.8	R5151 (RIGHT) 	WF36	COMPONENT SIDE
A9	UBINB1	0.6			
D8	UBINB2	0.7			
C8	UBINB3	0.7			
B8	UBINB4	0.6	R5144 (RIGHT) 		COMPONENT SIDE
A8	UBINB5	0.6			
D7	UBINB6	0.6			
C7	UBINB7	0.5			
A2	CLKINB2	0	R5306 (LEFT)	WF69	COMPONENT SIDE
A5	VSIB	0	R5113 (LOWER)	WF38	COMPONENT SIDE
A22	NRST	3.1	R5311 (LOWER)	—	FOIL SIDE
B5	HSIB	0	R5114 (LOWER)	WF39	COMPONENT SIDE
B9	CLKINB	1.6	R5158 (RIGHT)	WF37	COMPONENT SIDE
E3	CLKA	1.5	R5069 (RIGHT)	WF9	COMPONENT SIDE
L2	MVPINA	0	R5024 (RIGHT)	WF34	COMPONENT SIDE
L3	MHPINA	0	R5025 (RIGHT)	WF33	COMPONENT SIDE
L4	MCLKA	1.5	R5029 (RIGHT)	WF32	COMPONENT SIDE
E7 E8 E22 ⋮ etc.	VDDI	1.8	Pin 3 of IC5305	—	FOIL SIDE
D11 D12 D22 ⋮ etc.	VDDE	3.3	L5304 (LOWER)	—	FOIL SIDE
P3	PLL_AVD1	3.3	L5307 (RIGHT)	—	FOIL SIDE
P4	PLL_AVD2				
A11 A20 B11 ⋮ etc.	VSS (GND)	0	R5310 (RIGHT)	—	COMPONENT SIDE
P1	PLL_AVS1	0	C5346 (UPPER)	—	COMPONENT SIDE
P2	PLL_AVS2				

MAIN III SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.


IC6003
MN102H90MTZ1
(MAIN MICROCONTROLLER)
LINK TO I/O CHART
IC6002
C0CBCBD00008
(+3.3V REG.)
IC6005
PT_SN74AHC2G66HDCT
IC6009
LSEQ0808
(FLASH MEMORY)
IC6010
LM2902PWR
C0ABCA000064
(OP AMP)
IC6004
C0EBE0000275
(RESET)
IC6006
LSEQ0806
(8kbit EEPROM)
EEPROM1
IC6007
LSEQ0807
(256kbit EEPROM)
EEPROM2
IC6008
PT_M62320FP
Q6001
2SB1218ARSHL
(DRIVE)
Q6003
UNR52130OL
(DRIVE)
Q6002
2SB1218ARSHL
(DRIVE)
Q6004
UNR52130OL
(DRIVE)
Q6011
2SD1819AOL
(COVER SW)
Q6007
2SD1819AOL (CLAMP)
Q6008
2SD1819AOL (CLAMP)
Q6013
2SD1819AOL
(INVERTER)
Q6012
2SD1819AOL
(INVERTER)
X6001
32.768KHz
(NO CONNECTION)
P6008 USED FOR
ADJUSTMENT AT
FACTORY ONLY
P6008
(TO OPERATION C.B.A. P6701)
P6005
P6007
P6006
STBY
L_ON_H
L_ERR
HDMI_HPD
CPU_OSDB4
CPU_OSDB3
CPU_OSDB2
CPU_OSDB1
CPU_OSDB0
CPU_OSDG5
CPU_OSDG4
CPU_OSDG3
CPU_OSDG2
CPU_OSDG1
CPU_OSDG0
CPU_OSDR4
CPU_OSDR3
CPU_OSDR2
CPU_OSDR1
CPU_OSDR0
STBY+5V
OSD_CLK
OSD_VS
CPU_OSD_YS
CPU_OSD_YM
OSD_HS
HDMI_A_MUTE_H
SYS_RST_L+3.3V
TEMP_LED
LAMP_LED
HDMI1_L/2_H
HDMI_A_PD_L
RGB_L
MAIN_V/Y_CC
SUB_V/Y_CC
I2C_SCK+3.3V
I2C_DATA+3.3V
I2C_SERVICE_L
ERROR
ZERO_X_DET
HDMI_INT
AMP_MUTE_L
LINE_MUTE_H
FILTER_DET
IR_IN
POWER_DOWN_L
5V
COVER_SW
SCL08
SDA08
TIMER_ON_H
VOUT_ENB
SCALER_CS
STBY_LINORMAL_H
3.3V
ATSC+5V
CEC_OUT
CEC_INT
SD_SCK
SD_DATA_OUT
SD_DATA_IN
I2C_DATA+5V
I2C_SCK+5V
H_PHASE
RESET
SD_BOOT
POWER_OFF
SB_MD
SB_DM
ATSC_INT
M_AFT
D_A_SW
ATSC_ON_H
TO M IV
TO M II
TO M I
TO M VI

LINK TO VOLTAGE CHART

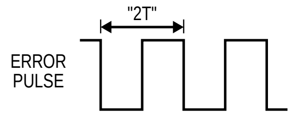
LSJB3150
MAIN III SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

I/O CHART OF IC6003

Pin No.	I/O	Port No.	Signal Name	Description
1	-	-	TSTMD1	(Not used)
2	-	P83	A20	(Not used)
3	O	P66	A07	ADDRESS 7
4	O	P65	A06	ADDRESS 6
5	O	P64	A05	ADDRESS 5
6	O	P63	A04	ADDRESS 4
7	O	P62	A03	ADDRESS 3
8	O	P61	A02	ADDRESS 2
9	O	P60	A01	ADDRESS 1
10	-	-	TEST	(Not used)
11	I	-	VDD	VDD (+3.3V)
12	I	-	RTCXI	32.768kHz OSCILLATION
13	O	-	RTCXO	32.768kHz OSCILLATION
14	-	-	VSS	GND
15	O	P45	HI0	STANDBY (L) / POWER ON (H)
16	O	P44	HI1	SCALER CS (L)
17	O	P43	VI0	DIGITAL TUNER OUTPUT (H) / NO OUTPUT (L)
18	O	P42	VI1	LAMP ON (H) / OFF (L)
19	I	P16	COVER_OPEN_H	LAMP COVER OPEN (H) / CLOSE (L)
20	O	P15	L_ON_H	LAMP ON / OFF CONTROL (ON (H) / OFF (L))
21	O	P14	STBY	STANDBY (L) / POWER ON (H)
22	I	P13	TM0IO	LAMP ERROR PULSE (ON (H) / OFF (L) / ERROR (PULSE)) ✻1
23	I/O	PC3	SDA0B	SERIAL DATA
24	O	PC2	SCL0B	SERIAL CLOCK
25	-	-	VSS	GND
26	-	P41	HCCLK0	(Not used)
27	O	P40	HCCLK1	HDMI HOT PLUG DETECT
28	I	-	VDD	VDD (+3.3V)
29	O	P37	BO4	OSD-B DATA 4
30	O	P36	BO3	OSD-B DATA 3
31	O	P35	BO2	OSD-B DATA 2
32	O	P34	BO1	OSD-B DATA 1
33	O	P33	BO0	OSD-B DATA 0
34	O	P32	GO5	OSD-G DATA 5
35	O	P31	GO4	OSD-G DATA 4
36	O	P30	GO3	OSD-G DATA 3
37	O	P27	GO2	OSD-G DATA 2
38	O	P26	GO1	OSD-G DATA 1
39	O	P25	GO0	OSD-G DATA 0
40	I	-	VDD	VDD (+3.3V)
41	-	-	VSS	GND
42	O	P24	RO4	OSD-R DATA 4
43	O	P23	RO3	OSD-R DATA 3
44	O	P22	RO2	OSD-R DATA 2
45	O	P21	RO1	OSD-R DATA 1
46	O	P20	RO0	OSD-R DATA 0
47	I	-	VDD	VDD (+3.3V)
48	I	-	OSDXI	OSD CLOCK
49	-	-	OSDXO	(Not used)
50	-	-	VSS	GND
51	O	P12	VSYNC	OSD V-SYNC
52	O	P11	YS	OSD-YS
53	O	P10	YM	OSD-YM
54	O	P07	HSYNC	OSD H-SYNC
55	O	PC1	SDA0A	HDMI AUDIO MUTE (H)
56	-	PC0	FA_3	(Not used)
57	-	P06	FA_2	(Not used)
58	I	P05	AL3	I^{2}C SERVICE (L)
59	O	P04	AL2	RESET (L)
60	O	P03	TEMP_LED_H	TEMP LED ON (H)
61	O	P02	LAMP_LED_H	LAMP LED ON (H)
62	O	P01	P_LED_R	POWER LED (RED) ON (L)
63	O	P00	P_LED_G	POWER LED (GREEN) ON (L)
64	-	-	AVSS	GND
65	I	-	AVDD2	VDD (+3.3V)
66	-	-	DT_IICON_H	(Not used)
67	O	-	HDMI1_L/S_H	HDMI 1 (L) / HDMI 2 (H)
68	O	-	RGB_L	RGB (L) / VIDEO (H)
69	O	-	HDMI_A_PD_L	HDMI AUDIO (IC5807) POWER DOWN (L)
70	-	-	COMP	(Not used)
71	I	-	VREF	V-REF FOR IC6003
72	-	-	IREF	(Not used)
73	-	-	AVSS	GND
74	I	-	CVBS1	MAIN COMPOSITE VIDEO
75	-	-	VREFHS1	(Not used)
76	-	-	CLL	(Not used)
77	I	-	AVDD1	VDD (+3.3V)
78	I	-	CVBS0	SUB COMPOSITE VIDEO
79	-	-	VREFHS0	(Not used)
80	-	-	CLH	(Not used)
81	-	-	PLLTST	(Not used)
82	I	-	AVDD1	VDD (+3.3V)
83	-	-	AVSS	GND
84	O	PC7	I2C_SCK_3.3V	I^{2}C SERIAL CLOCK 0
85	I/O	PC6	I2C_DATA_3.3V	I^{2}C SERIAL DATA 0
86	I	PF3	ERROR	KEY DATA 2
87	I	PF2	ZERO_X_DET	ZERO CROSS DETECT
88	I	PF1	HDMI_INT	MDMI INTERRUPT REQUEST
89	I	PF0	ATSC_INT	ATSC TUNER INTERRPT REQUEST
90	O	PE7	AMP_MUTE_L	AUDIO AMP MUTE (L)
91	O	PE6	LINE_MUTE_H	LINE AUDIO OUT MUTE (H)
92	-	PE5	FA_1	(Not used)
93	I	PE4	FILTER_DET	CLOGGED FILTER DETECT (A/D INPUT)
94	I-	PE3	M_AFT	MAIN TUNER AFC
95	I	PE2	KEY_IN2	LCD DRIVE ERROR INFORMATION ✻2
96	I	PE1	KEY_IN1	KEY DATA 1
97	I	PE0	KEY_IN0	KEY DATA 0
98	-	-	VSS	GND
99	O	-	OSC2	4MHz OSCILLATION
100	I	-	OSC1	4MHz OSCILLATION
101	I	-	VDD	VDD (+3.3V)
102	I	P57	IR_IN	IR DATA
103	O	P95	ATSC_SO	ATSC SERIAL DATA 0
104	I	P94	ATSC_SI	ATSC SERIAL DATA 1
105	I	P93	DTV_P_ON_H	DIGITAL TUNER POWER ON (H)
106	O	P92	SBO0	SERIAL DATA 0
107	I	P91	SBI0	SERIAL DATA 1
108	O	P90	SBT0	SERIAL CLOCK
109	-	P56	PWM3	(Not used)
110	O	P55	PWM2	H PHASE CONTROL
111	O	P54	PWM1	SD BOOT (H)
112	O	P53	PWM0	IC6009 CS (L)
113	O	-	PDS	POWER DOWM (L)
114	O	-	D_A_SW	DIGITAL TUNER (L) / ANALOG TUNER (H)
115	O	PD1	WDOUT	DIGITAL TUNER RESET (L)
116	O	PD0	SCL1	I^{2}C SERIAL CLOCK 1
117	I/O	PC5	SDA1	I^{2}C SERIAL DATA 1
118	-	PC4	CPUMD2	(Not used)
119	-	-	CPUMD1	(Not used)
120	-	-	CPUMD0	(Not used)
121	-	-	TSTMD0	(Not used)
122	O	P52	WE	IC6009 WRITE ENABLE (L)
123	O	P51	OE	IC6009 OUTPUT ENABLE (L)
124	I	-	VDD	VDD (+3.3V)
125	I	P50	/RST	RESET (L)
126	-	-	VSS	GND
127	I/O	PB7	D15	DATA 15
128	I/O	PB6	D14	DATA 14
129	I/O	PB5	D13	DATA 13
130	I/O	PB4	D12	DATA 12
131	I/O	PB3	D11	DATA 11
132	I/O	PB2	D10	DATA 10
133	I/O	PB1	D09	DATA 9
134	I/O	PB0	D08	DATA 8
135	I/O	PA7	D07	DATA 7
136	I/O	PA6	D06	DATA 6
137	I/O	PA5	D05	DATA 5
138	I/O	PA4	D04	DATA 4
139	-	-	VSS	GND
140	I	-	VDD	VDD (+3.3V)
141	I/O	PA3	D03	DATA 3
142	I/O	PA2	D02	DATA 2
143	I/O	PA1	D01	DATA 1
144	I/O	PA0	D00	DATA 0
145	-	P82	A19	(Not used)
146	O	P81	A18	ADDRESS 18
147	O	P80	A17	ADDRESS 17
148	O	P77	A16	ADDRESS 16
149	O	P76	A15	ADDRESS 15
150	O	P75	A14	ADDRESS 14
151	O	P74	A13	ADDRESS 13
152	O	P73	A12	ADDRESS 12
153	I	-	VDD	VDD (+3.3V)
154	-	-	VSS	GND
155	O	P72	A11	ADDRESS 11
156	O	P71	A10	ADDRESS 10
157	O	P70	A09	ADDRESS 9
158	O	P67	A08	ADDRESS 8
159	-	P84	A21	(Not used)
160	-	-	OSCMD0	(Not used)

*1

Pin 22	Lamp Status
H	Lamp On
ERROR 1 (T=128ms)	The Failure Of Lamp light up
ERROR 2 (T= 96ms)	Abnormal Lamp Voltage
ERROR 3 (T= 64ms)	Abnormal Temperature
ERROR 4 (T= 32ms)	Other Causes
L	Lamp Off



*2

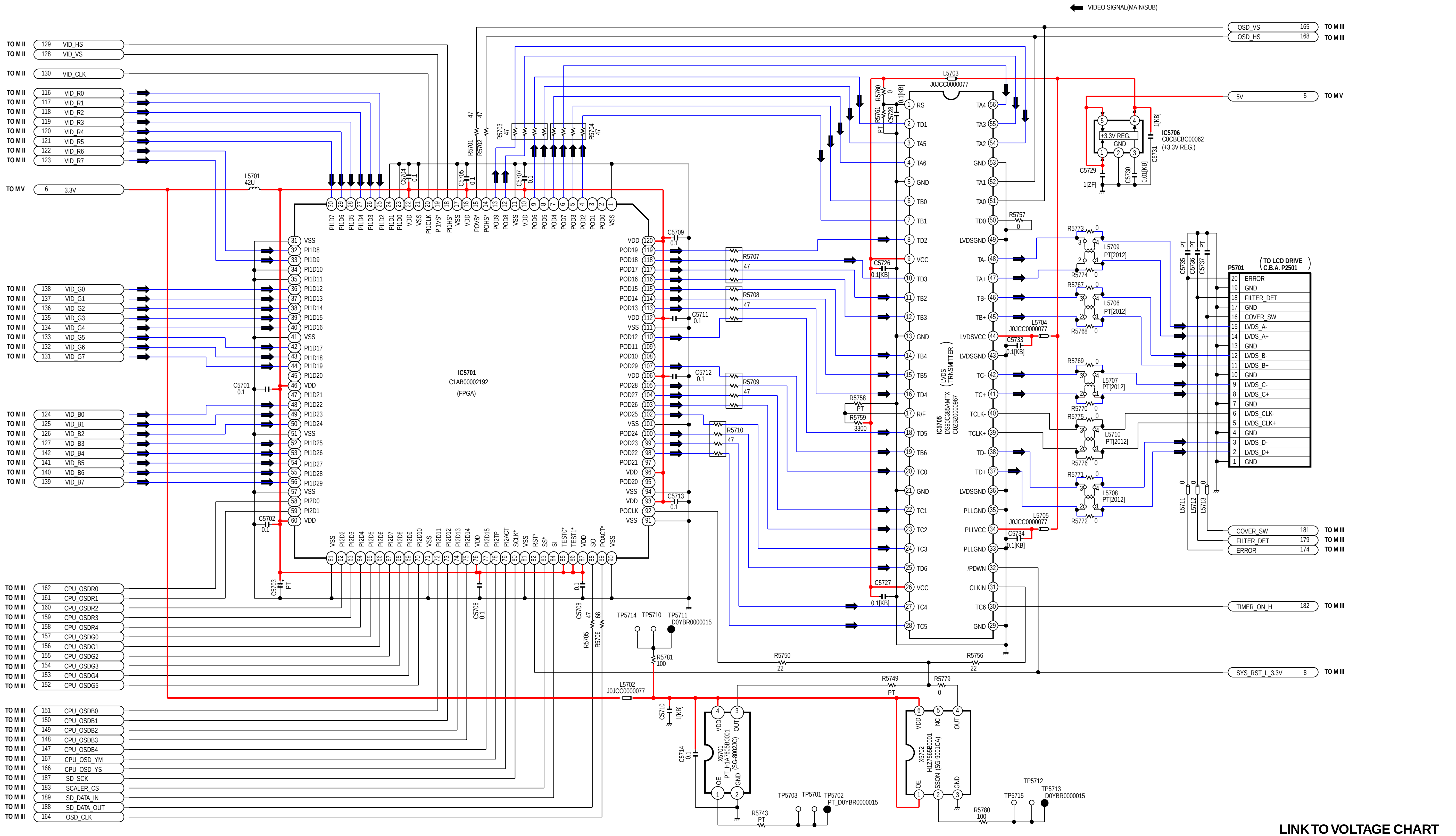
ERROR INFORMATION	ERROR VOLTAGE
Temperature Sensor shorted or open (Thermistor 1 C.B.A.)	2.71V - 3.09V
Abnormal Temperature (Thermistor 1 C.B.A.)	2.31V - 2.69V
Temperature Sensor shorted or open (Thermistor 2 C.B.A.)	1.86V - 2.29V
Abnormal Temperature (Thermistor 2 C.B.A.)	1.42V - 1.84V
Fan 1 Lock	1.02V - 1.40V
Fan 2 Lock	0.62V - 1.00V
Fan 3 Lock	0.22V - 0.60V

MAIN IV SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

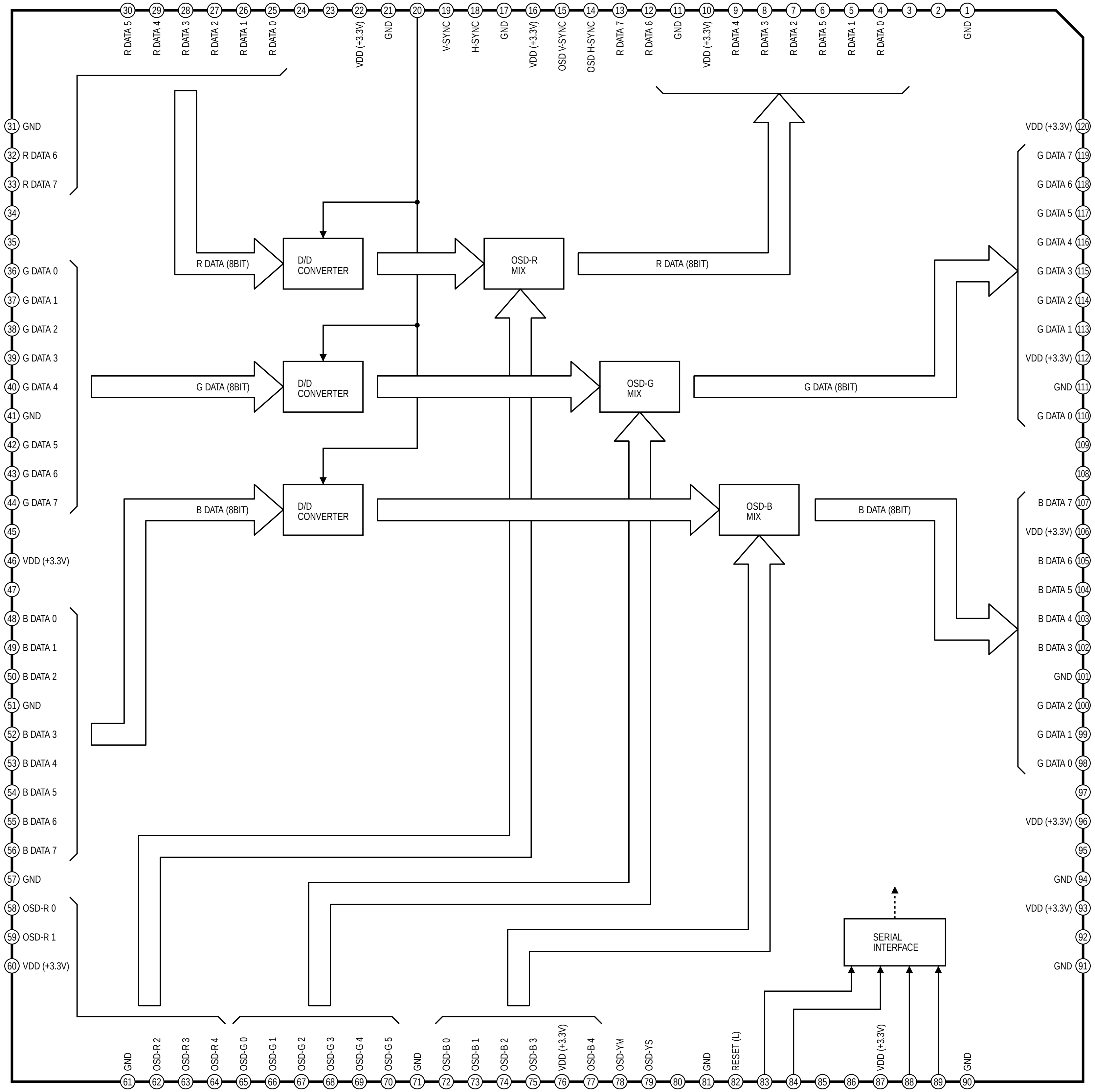
NOTE:
PARTS MARKED "PT" ARE NOT USED.


VIDEO SIGNAL(MAIN/SUB)
TO M II 129 VID_HS
TO M II 128 VID_VS
TO M II 130 VID_CLK
TO M II 116 VID_R0
TO M II 117 VID_R1
TO M II 118 VID_R2
TO M II 119 VID_R3
TO M II 120 VID_R4
TO M II 121 VID_R5
TO M II 122 VID_R6
TO M II 123 VID_R7
TO M V 6 3.3V
TO M II 138 VID_G0
TO M II 137 VID_G1
TO M II 136 VID_G2
TO M II 135 VID_G3
TO M II 134 VID_G4
TO M II 133 VID_G5
TO M II 132 VID_G6
TO M II 131 VID_G7
TO M II 124 VID_B0
TO M II 125 VID_B1
TO M II 126 VID_B2
TO M II 127 VID_B3
TO M II 142 VID_B4
TO M II 141 VID_B5
TO M II 140 VID_B6
TO M II 139 VID_B7
TO M III 162 CPU_OSDR0
TO M III 161 CPU_OSDR1
TO M III 160 CPU_OSDR2
TO M III 159 CPU_OSDR3
TO M III 158 CPU_OSDR4
TO M III 157 CPU_OSDG0
TO M III 156 CPU_OSDG1
TO M III 155 CPU_OSDG2
TO M III 154 CPU_OSDG3
TO M III 153 CPU_OSDG4
TO M III 152 CPU_OSDG5
TO M III 151 CPU_OSDB0
TO M III 150 CPU_OSDB1
TO M III 149 CPU_OSDB2
TO M III 148 CPU_OSDB3
TO M III 147 CPU_OSDB4
TO M III 167 CPU_OSD_YM
TO M III 166 CPU_OSD_YS
TO M III 187 SD_SCK
TO M III 183 SCALER_CS
TO M III 189 SD_DATA_IN
TO M III 188 SD_DATA_OUT
TO M III 164 OSD_CLK
OSD_VS 165 TO M III
OSD_HS 168 TO M III
5V 5 TO M V
COVER_SW 181 TO M III
FILTER_DET 179 TO M III
ERROR 174 TO M III
TIMER_ON_H 182 TO M III
SYS_RST_L_3.3V 8 TO M III
IC5701
C1AB00002192
(FPGA)
IC5705
DS90C385AMTX
C0ZBZ0000967
(LVDS TRANSMITTER)
IC5706
C0CBCBC00062
(+3.3V REG.)
+3.3V REG.
GND
L5701 42U
L5702 J0JCC0000077
L5703 J0JCC0000077
L5704 J0JCC0000077
L5705 J0JCC0000077
L5706 PT[2012]
L5707 PT[2012]
L5708 PT[2012]
L5709 PT[2012]
L5710 PT[2012]
L5711 L5712 L5713
C5701 0.1
C5702 0.1
C5703 PT
C5704 0.1
C5705 0.1
C5706 0.1
C5707 0.1
C5708 0.1
C5709 0.1
C5710 1[KB]
C5711 0.1
C5712 0.1
C5713 0.1
C5714 0.1
C5726 0.1[KB]
C5727 0.1[KB]
C5728 0.1[KB]
C5729 1[ZF]
C5730 0.01[KB]
C5731 1[KB]
C5733 0.1[KB]
C5734 0.1[KB]
C5735 C5736 C5737 PT
R5701 47
R5702 47
R5703 47
R5704 47
R5705 47
R5706 68
R5707 47
R5708 47
R5709 47
R5710 47
R5743 PT
R5749 PT
R5750 22
R5756 22
R5757 0
R5758 PT
R5759 3300
R5760 0
R5761 PT
R5767 0
R5768 0
R5769 0
R5770 0
R5771 0
R5772 0
R5773 0
R5774 0
R5775 0
R5776 0
R5779 0
R5780 100
R5781 100
X5701 PT_H1A7605B0001 (SG-8002JC)
X5702 H1Z7565B0001 (SG-9001CA)
VDD OUT OE GND NC SSON
TP5701 TP5702 PT_D0YBR0000015 TP5703
TP5710 TP5711 D0YBR0000015 TP5714
TP5712 TP5713 D0YBR0000015 TP5715
P5701 (TO LCD DRIVE C.B.A. P2501)
20 ERROR
19 GND
18 FILTER_DET
17 GND
16 COVER_SW
15 LVDS_A-
14 LVDS_A+
13 GND
12 LVDS_B-
11 LVDS_B+
10 GND
9 LVDS_C-
8 LVDS_C+
7 GND
6 LVDS_CLK-
5 LVDS_CLK+
4 GND
3 LVDS_D-
2 LVDS_D+
1 GND
1 RS
2 TD1
3 TA5
4 TA6
5 GND
6 TB0
7 TB1
8 TD2
9 VCC
10 TD3
11 TB2
12 TB3
13 GND
14 TB4
15 TB5
16 TD4
17 R/F
18 TD5
19 TB6
20 TC0
21 GND
22 TC1
23 TC2
24 TC3
25 TD6
26 VCC
27 TC4
28 TC5
29 GND
30 TC6
31 CLKIN
32 /PDWN
33 PLLGND
34 PLLVCC
35 PLLGND
36 LVDSGND
37 TD+
38 TD-
39 TCLK+
40 TCLK-
41 TC+
42 TC-
43 LVDSGND
44 LVDSVCC
45 TB+
46 TB-
47 TA+
48 TA-
49 LVDSGND
50 TD0
51 TA0
52 TA1
53 GND
54 TA2
55 TA3
56 TA4
1 VSS
2 POD0
3 POD1
4 POD2
5 POD3
6 POD4
7 POD5
8 POD6
9 VDD
10 VSS
11 POD8
12 POD9
13 POHS*
14 POVS*
15 VDD
16 VSS
17 PI1HS*
18 VSS
19 PI1VS*
20 PI1CLK
21 VSS
22 VDD
23 PI1D0
24 PI1D1
25 PI1D2
26 PI1D3
27 PI1D4
28 PI1D5
29 PI1D6
30 PI1D7
31 VSS
32 PI1D8
33 PI1D9
34 PI1D10
35 PI1D11
36 PI1D12
37 PI1D13
38 PI1D14
39 PI1D15
40 PI1D16
41 VSS
42 PI1D17
43 PI1D18
44 PI1D19
45 PI1D20
46 VDD
47 PI1D21
48 PI1D22
49 PI1D23
50 PI1D24
51 VSS
52 PI1D25
53 PI1D26
54 PI1D27
55 PI1D28
56 PI1D29
57 VSS
58 PI2D0
59 PI2D1
60 VDD
61 VSS
62 PI2D2
63 PI2D3
64 PI2D4
65 PI2D5
66 PI2D6
67 PI2D7
68 PI2D8
69 PI2D9
70 PI2D10
71 VSS
72 PI2D11
73 PI2D12
74 PI2D13
75 PI2D14
76 VDD
77 PI2D15
78 PI2TP
79 PI2ACT
80 SCLK*
81 VSS
82 RST*
83 SS*
84 SI
85 TEST0*
86 TEST1*
87 VDD
88 SO
89 POACT*
90 VSS
91 VSS
92 POCLK
93 VDD
94 VSS
95 POD20
96 VDD
97 POD21
98 POD22
99 POD23
100 POD24
101 VSS
102 POD25
103 POD26
104 POD27
105 POD28
106 VDD
107 POD29
108 POD10
109 POD11
110 POD12
111 VSS
112 VDD
113 POD13
114 POD14
115 POD15
116 POD16
117 POD17
118 POD18
119 POD19
120 VDD

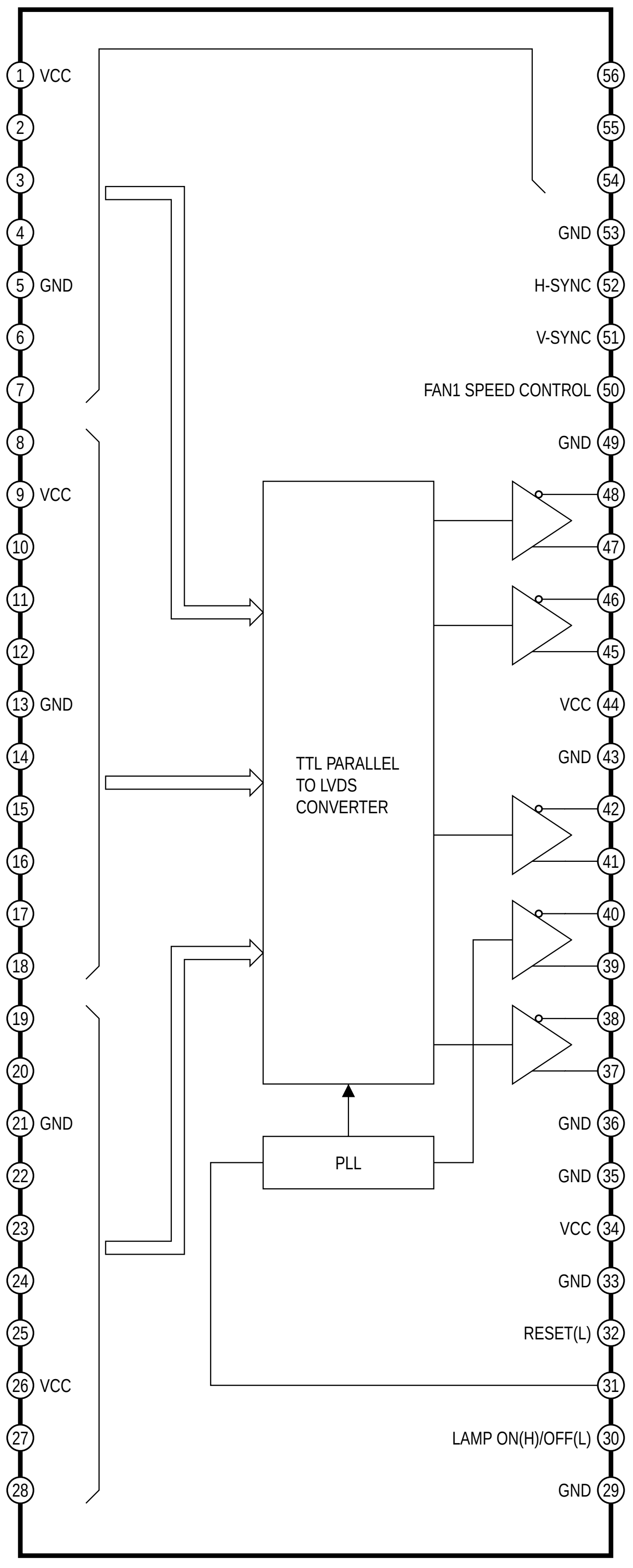
LINK TO VOLTAGE CHART

LSJB3150
MAIN IV SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

IC5701 DETAIL BLOCK DIAGRAM


30 R DATA 5
29 R DATA 4
28 R DATA 3
27 R DATA 2
26 R DATA 1
25 R DATA 0
24
23
22 VDD (+3.3V)
21 GND
20
19 V-SYNC
18 H-SYNC
17 GND
16 VDD (+3.3V)
15 OSD V-SYNC
14 OSD H-SYNC
13 R DATA 7
12 R DATA 6
11 GND
10 VDD (+3.3V)
9 R DATA 4
8 R DATA 3
7 R DATA 2
6 R DATA 5
5 R DATA 1
4 R DATA 0
3
2
1 GND
31 GND
32 R DATA 6
33 R DATA 7
34
35
36 G DATA 0
37 G DATA 1
38 G DATA 2
39 G DATA 3
40 G DATA 4
41 GND
42 G DATA 5
43 G DATA 6
44 G DATA 7
45
46 VDD (+3.3V)
47
48 B DATA 0
49 B DATA 1
50 B DATA 2
51 GND
52 B DATA 3
53 B DATA 4
54 B DATA 5
55 B DATA 6
56 B DATA 7
57 GND
58 OSD-R 0
59 OSD-R 1
60 VDD (+3.3V)
61 GND
62 OSD-R 2
63 OSD-R 3
64 OSD-R 4
65 OSD-G 0
66 OSD-G 1
67 OSD-G 2
68 OSD-G 3
69 OSD-G 4
70 OSD-G 5
71 GND
72 OSD-B 0
73 OSD-B 1
74 OSD-B 2
75 OSD-B 3
76 VDD (+3.3V)
77 OSD-B 4
78 OSD-YM
79 OSD-YS
80
81 GND
82 RESET (L)
83
84
85
86
87 VDD (+3.3V)
88
89
90 GND
VDD (+3.3V) 120
G DATA 7 119
G DATA 6 118
G DATA 5 117
G DATA 4 116
G DATA 3 115
G DATA 2 114
G DATA 1 113
VDD (+3.3V) 112
GND 111
G DATA 0 110
109
108
B DATA 7 107
VDD (+3.3V) 106
B DATA 6 105
B DATA 5 104
B DATA 4 103
B DATA 3 102
GND 101
G DATA 2 100
G DATA 1 99
G DATA 0 98
97
VDD (+3.3V) 96
95
GND 94
VDD (+3.3V) 93
92
GND 91
R DATA (8BIT)
D/D CONVERTER
OSD-R MIX
R DATA (8BIT)
G DATA (8BIT)
D/D CONVERTER
OSD-G MIX
G DATA (8BIT)
B DATA (8BIT)
D/D CONVERTER
OSD-B MIX
B DATA (8BIT)
SERIAL INTERFACE

IC5705 DETAIL BLOCK DIAGRAM

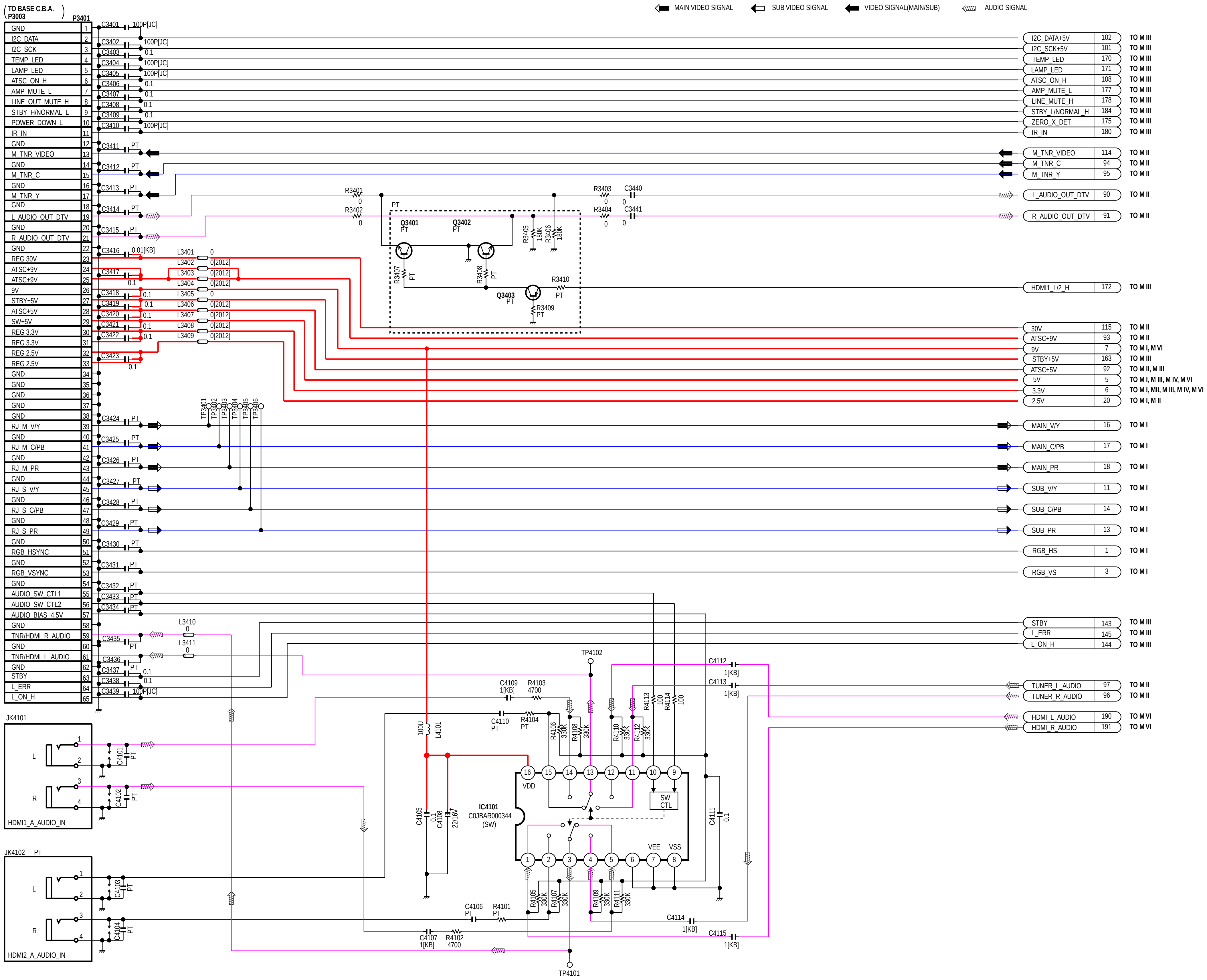

1 VCC
2
3
4
5 GND
6
7
8
9 VCC
10
11
12
13 GND
14
15
16
17
18
19
20
21 GND
22
23
24
25
26 VCC
27
28
56
55
54
GND 53
H-SYNC 52
V-SYNC 51
FAN1 SPEED CONTROL 50
GND 49
48
47
46
45
VCC 44
GND 43
42
41
40
39
38
37
GND 36
GND 35
VCC 34
GND 33
RESET(L) 32
31
LAMP ON(H)/OFF(L) 30
GND 29
TTL PARALLEL TO LVDS CONVERTER
PLL

MAIN V SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.


MAIN VIDEO SIGNAL
SUB VIDEO SIGNAL
VIDEO SIGNAL(MAIN/SUB)
AUDIO SIGNAL
TO BASE C.B.A.
P3003
P3401
GND 1
I2C_DATA 2
I2C_SCK 3
TEMP_LED 4
LAMP_LED 5
ATSC_ON_H 6
AMP_MUTE_L 7
LINE_OUT_MUTE_H 8
STBY_H/NORMAL_L 9
POWER_DOWN_L 10
IR_IN 11
GND 12
M_TNR_VIDEO 13
GND 14
M_TNR_C 15
GND 16
M_TNR_Y 17
GND 18
L_AUDIO_OUT_DTV 19
GND 20
R_AUDIO_OUT_DTV 21
GND 22
REG 30V 23
ATSC+9V 24
ATSC+9V 25
9V 26
STBY+5V 27
ATSC+5V 28
SW+5V 29
REG 3.3V 30
REG 3.3V 31
REG 2.5V 32
REG 2.5V 33
GND 34
GND 35
GND 36
GND 37
GND 38
RJ_M_V/Y 39
GND 40
RJ_M_C/PB 41
GND 42
RJ_M_PR 43
GND 44
RJ_S_V/Y 45
GND 46
RJ_S_C/PB 47
GND 48
RJ_S_PR 49
GND 50
RGB_HSYNC 51
GND 52
RGB_VSYNC 53
GND 54
AUDIO_SW_CTL1 55
AUDIO_SW_CTL2 56
AUDIO_BIAS+4.5V 57
GND 58
TNR/HDMI_R_AUDIO 59
GND 60
TNR/HDMI_L_AUDIO 61
GND 62
STBY 63
L_ERR 64
L_ON_H 65
C3401 100P[JC]
C3402 100P[JC]
C3403 0.1
C3404 100P[JC]
C3405 100P[JC]
C3406 0.1
C3407 0.1
C3408 0.1
C3409 0.1
C3410 100P[JC]
C3411 PT
C3412 PT
C3413 PT
C3414 PT
C3415 PT
C3416 0.01[KB]
C3417 0.1
C3418 0.1
C3419 0.1
C3420 0.1
C3421 0.1
C3422 0.1
C3423 0.1
C3424 PT
C3425 PT
C3426 PT
C3427 PT
C3428 PT
C3429 PT
C3430 PT
C3431 PT
C3432 PT
C3433 PT
C3434 PT
C3435 PT
C3436 PT
C3437 0.1
C3438 0.1
C3439 100P[JC]
L3401 0
L3402 0[2012]
L3403 0[2012]
L3404 0[2012]
L3405 0
L3406 0[2012]
L3407 0[2012]
L3408 0[2012]
L3409 0[2012]
L3410 0
L3411 0
R3401 0
R3402 0
R3403 0
R3404 0
C3440 0
C3441 0
PT
Q3401 PT
Q3402 PT
Q3403 PT
R3405 180K
R3406 100K
R3407 PT
R3408 PT
R3409 PT
R3410 PT
TP3401
TP3402
TP3403
TP3404
TP3405
TP3406
I2C_DATA+5V 102 TO M III
I2C_SCK+5V 101 TO M III
TEMP_LED 170 TO M III
LAMP_LED 171 TO M III
ATSC_ON_H 108 TO M III
AMP_MUTE_L 177 TO M III
LINE_MUTE_H 178 TO M III
STBY_L/NORMAL_H 184 TO M III
ZERO_X_DET 175 TO M III
IR_IN 180 TO M III
M_TNR_VIDEO 114 TO M II
M_TNR_C 94 TO M II
M_TNR_Y 95 TO M II
L_AUDIO_OUT_DTV 90 TO M II
R_AUDIO_OUT_DTV 91 TO M II
HDMI1_L/2_H 172 TO M III
30V 115 TO M II
ATSC+9V 93 TO M II
9V 7 TO M I, M VI
STBY+5V 163 TO M III
ATSC+5V 92 TO M II, M III
5V 5 TO M I, M III, M IV, M VI
3.3V 6 TO M I, MII, M III, M IV, M VI
2.5V 20 TO M I, M II
MAIN_V/Y 16 TO M I
MAIN_C/PB 17 TO M I
MAIN_PR 18 TO M I
SUB_V/Y 11 TO M I
SUB_C/PB 14 TO M I
SUB_PR 13 TO M I
RGB_HS 1 TO M I
RGB_VS 3 TO M I
STBY 143 TO M III
L_ERR 145 TO M III
L_ON_H 144 TO M III
TUNER_L_AUDIO 97 TO M II
TUNER_R_AUDIO 96 TO M II
HDMI_L_AUDIO 190 TO M VI
HDMI_R_AUDIO 191 TO M VI
TP4102
TP4101
C4112 1[KB]
C4113 1[KB]
C4109 1[KB]
R4103 4700
C4110 PT
R4104 PT
100U
L4101
R4106 330K
R4108 330K
R4110 330K
R4112 330K
R4113 100
R4114 100
IC4101
C0JBAR000344
(SW)
VDD
SW CTL
VEE
VSS
16 15 14 13 12 11 10 9
1 2 3 4 5 6 7 8
C4105 0.1
C4108 22/16V
C4111 0.1
R4105 330K
R4107 330K
R4109 330K
R4111 330K
C4106 PT
R4101 PT
C4107 1[KB]
R4102 4700
C4114 1[KB]
C4115 1[KB]
JK4101
L
R
1
2
3
4
C4101 PT
C4102 PT
HDMI1_A_AUDIO_IN
JK4102 PT
C4103 PT
C4104 PT
HDMI2_A_AUDIO_IN

LINK TO VOLTAGE CHART

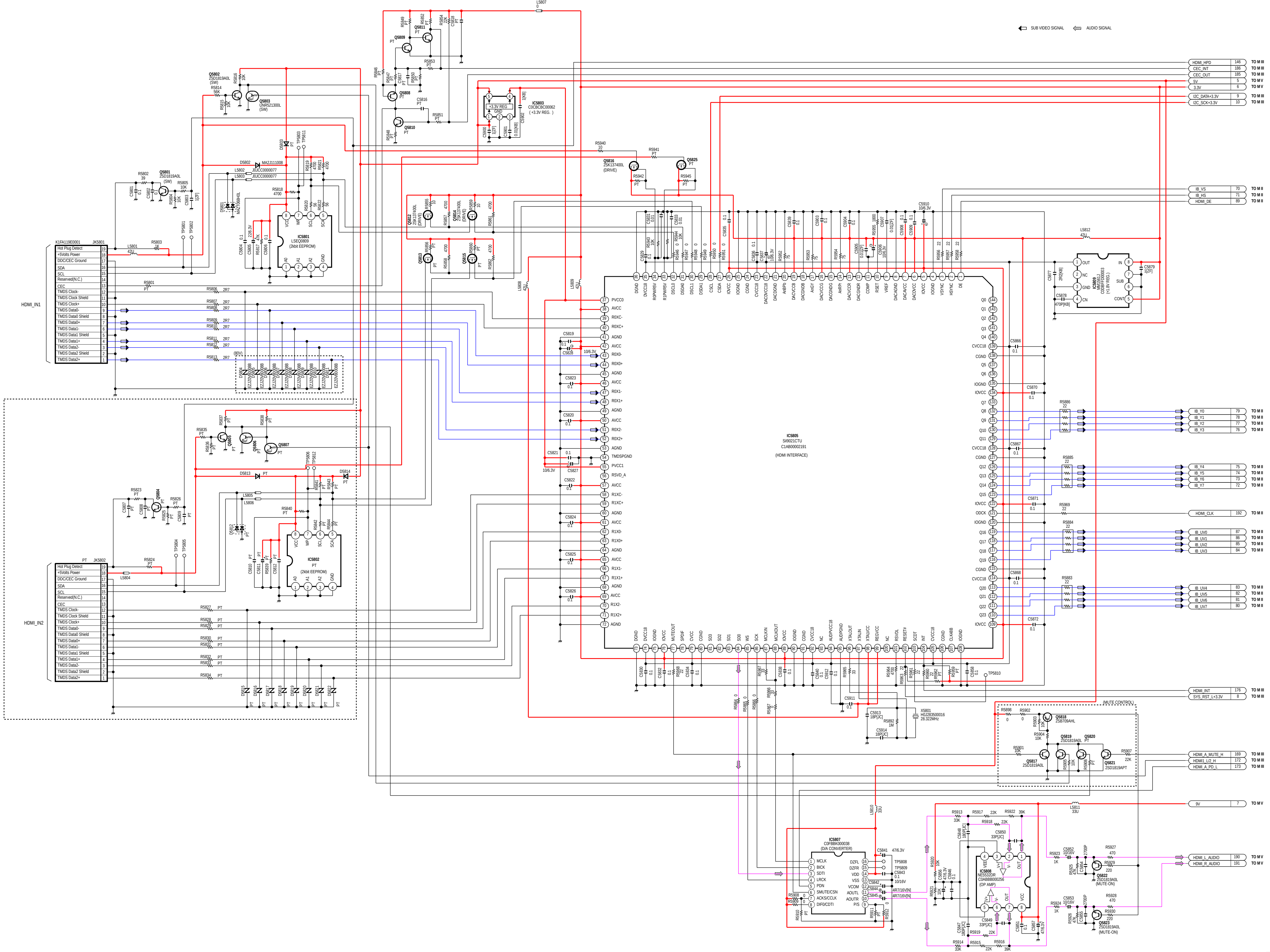
LSJB3150
MAIN V SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

MAIN VI SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

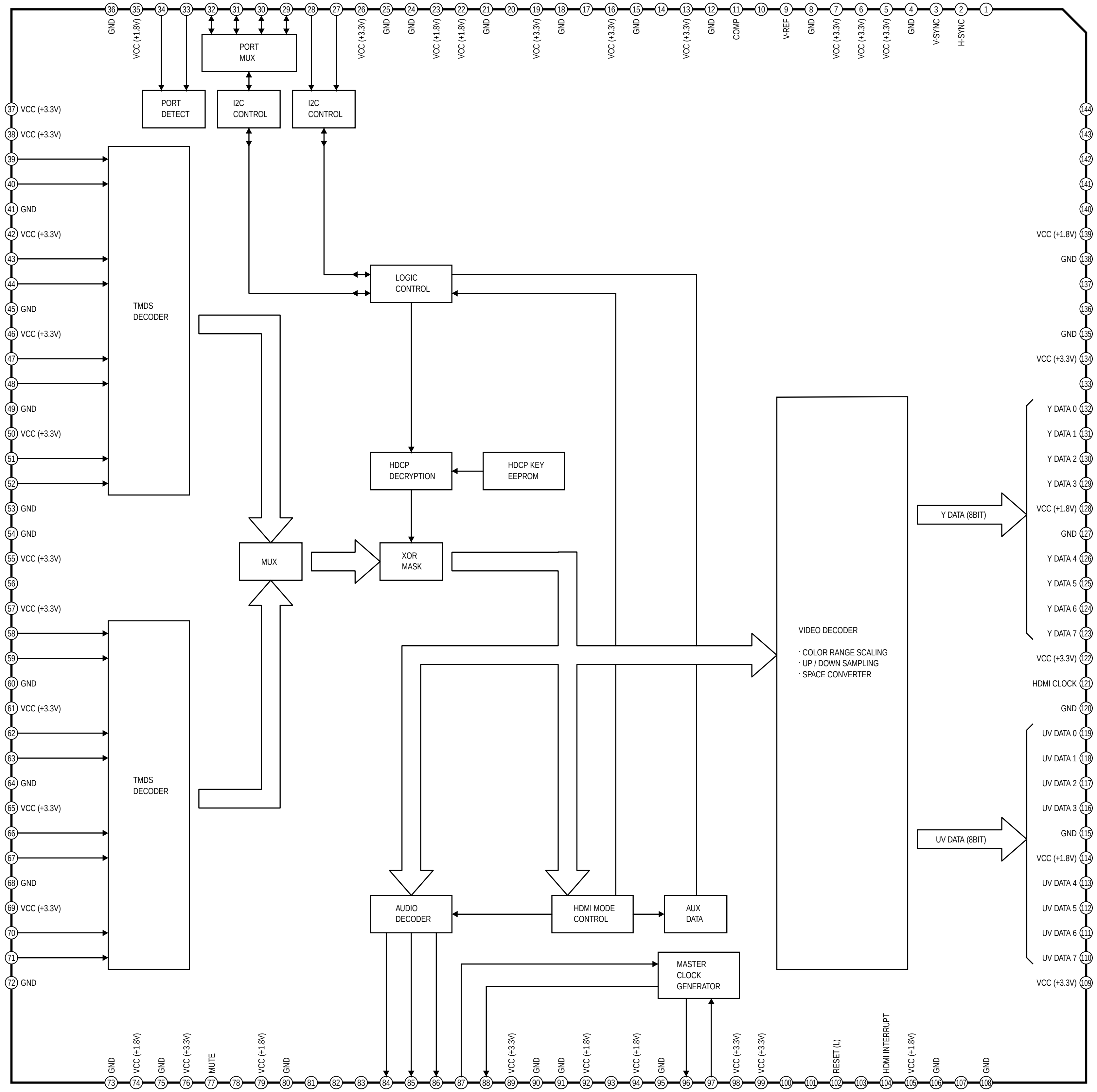
NOTE:
PARTS MARKED "PT" ARE NOT USED.


SUB VIDEO SIGNAL
AUDIO SIGNAL
HDMI_IN1
HDMI_IN2
IC5805
SiI9021CTU
C1AB00002191
(HDMI INTERFACE)
IC5801
(2kbit EEPROM)
IC5802
(2kbit EEPROM)
IC5803
(+3.3V REG.)
IC5807
(D/A CONVERTER)
IC5808
(OP AMP)
(MUTE CONTROL)
TO M III
TO M V

LINK TO VOLTAGE CHART

LSJB3150
MAIN VI SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

IC5805 DETAIL BLOCK DIAGRAM


36 GND
35 VCC (+1.8V)
34
33
32
31
30
29
28
27
26 VCC (+3.3V)
25 GND
24 GND
23 VCC (+1.8V)
22 VCC (+1.8V)
21 GND
20
19 VCC (+3.3V)
18 GND
17
16 VCC (+3.3V)
15 GND
14
13 VCC (+3.3V)
12 GND
11 COMP
10
9 V-REF
8 GND
7 VCC (+3.3V)
6 VCC (+3.3V)
5 VCC (+3.3V)
4 GND
3 V-SYNC
2 H-SYNC
1
PORT MUX
PORT DETECT
I2C CONTROL
I2C CONTROL
37 VCC (+3.3V)
38 VCC (+3.3V)
39
40
41 GND
42 VCC (+3.3V)
43
44
45 GND
46 VCC (+3.3V)
47
48
49 GND
50 VCC (+3.3V)
51
52
53 GND
54 GND
55 VCC (+3.3V)
56
57 VCC (+3.3V)
58
59
60 GND
61 VCC (+3.3V)
62
63
64 GND
65 VCC (+3.3V)
66
67
68 GND
69 VCC (+3.3V)
70
71
72 GND
TMDS DECODER
TMDS DECODER
LOGIC CONTROL
HDCP DECRYPTION
HDCP KEY EEPROM
MUX
XOR MASK
VIDEO DECODER
· COLOR RANGE SCALING
· UP / DOWN SAMPLING
· SPACE CONVERTER
Y DATA (8BIT)
UV DATA (8BIT)
AUDIO DECODER
HDMI MODE CONTROL
AUX DATA
MASTER CLOCK GENERATOR
144
143
142
141
140
VCC (+1.8V) 139
GND 138
137
136
GND 135
VCC (+3.3V) 134
133
Y DATA 0 132
Y DATA 1 131
Y DATA 2 130
Y DATA 3 129
VCC (+1.8V) 128
GND 127
Y DATA 4 126
Y DATA 5 125
Y DATA 6 124
Y DATA 7 123
VCC (+3.3V) 122
HDMI CLOCK 121
GND 120
UV DATA 0 119
UV DATA 1 118
UV DATA 2 117
UV DATA 3 116
GND 115
VCC (+1.8V) 114
UV DATA 4 113
UV DATA 5 112
UV DATA 6 111
UV DATA 7 110
VCC (+3.3V) 109
73 GND
74 VCC (+1.8V)
75 GND
76 VCC (+3.3V)
77 MUTE
78
79 VCC (+1.8V)
80 GND
81
82
83
84
85
86
87
88
89 VCC (+3.3V)
90 GND
91 GND
92 VCC (+1.8V)
93
94 VCC (+1.8V)
95 GND
96
97
98 VCC (+3.3V)
99 VCC (+3.3V)
100
101
102 RESET (L)
103
104 HDMI INTERRUPT
105 VCC (+1.8V)
106 GND
107
108 GND

IC5805 DETAIL BLOCK DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

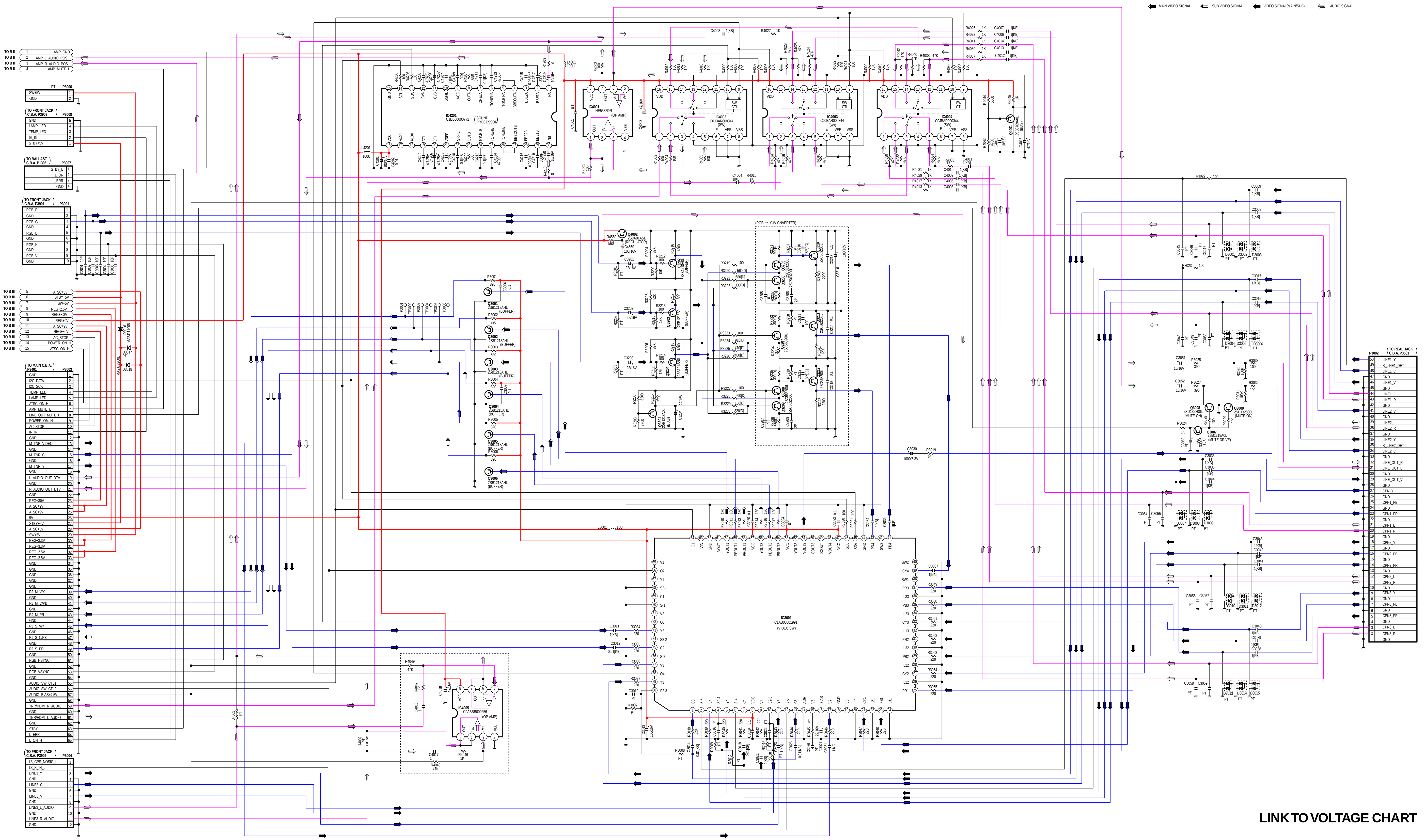
12.4. BASE SCHEMATIC DIAGRAMS

BASE I SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

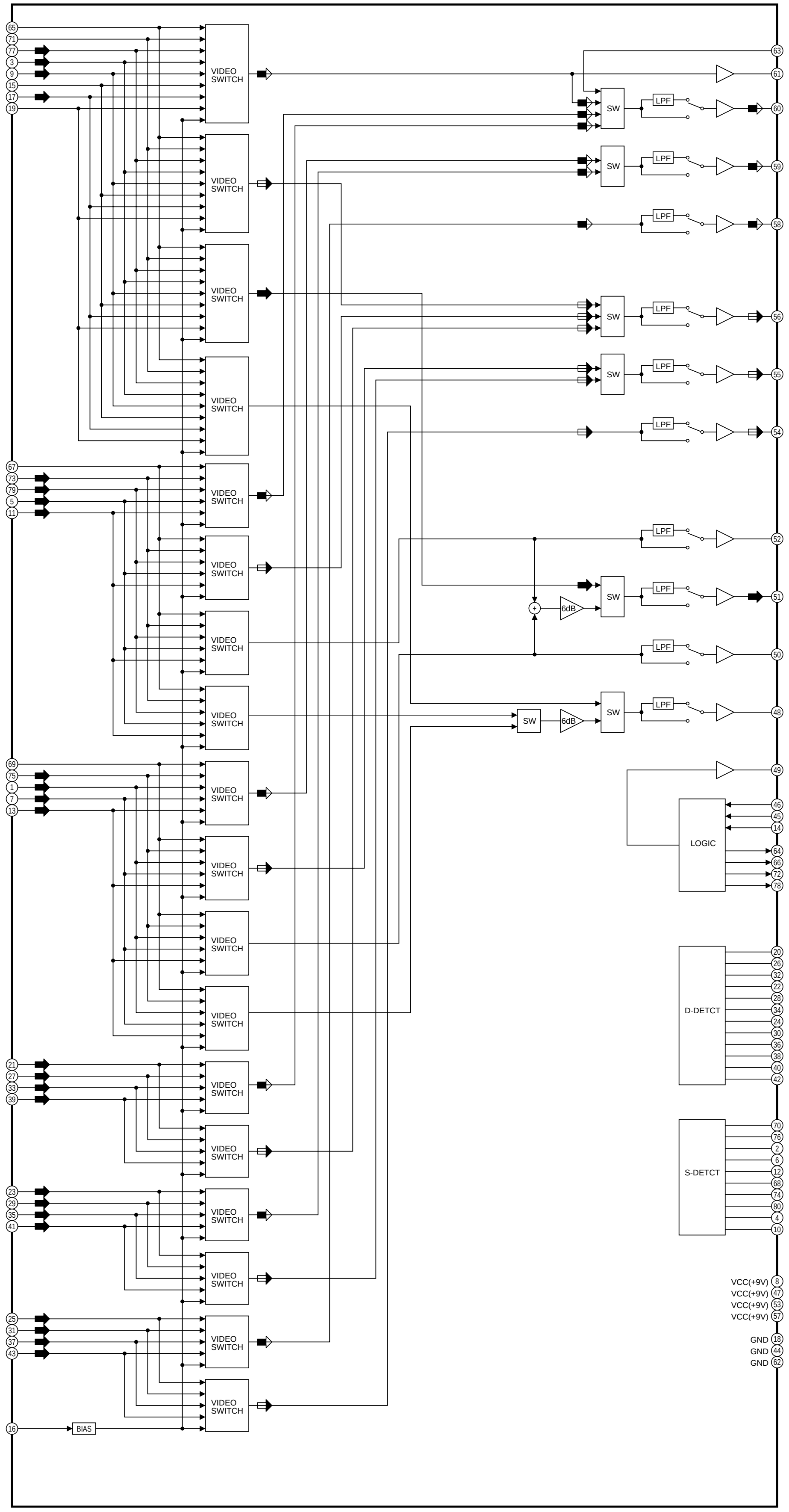
NOTE:
PARTS MARKED "PT" ARE NOT USED.


MAIN VIDEO SIGNAL
SUB VIDEO SIGNAL
VIDEO SIGNAL(MAIN/SUB)
AUDIO SIGNAL
IC4201 C1BB00000772 (SOUND PROCESSOR)
IC4001 NE5532DR (OP AMP)
IC4002 C0JBAB000344 (SW)
IC4003 C0JBAB000344 (SW)
IC4004 C0JBAB000344 (SW)
Q4002 2SD601ASL (REGULATOR)
(RGB → YUV CNVERTER)
Q3001 2SB1218AHL (BUFFER)
Q3002 2SB1218AHL (BUFFER)
Q3003 2SB1218AHL (BUFFER)
Q3004 2SB1218AHL (BUFFER)
Q3005 2SB1218AHL (BUFFER)
Q3006 2SB1218AHL (BUFFER)
IC3001 C1AB00001991 (VIDEO SW)
IC4005 C0ABBB000256 (OP AMP)
Q3008 2SD1328001L (MUTE-ON)
Q3009 2SD1328001L (MUTE-ON)
Q3007 2SB1218A0L (MUTE-DRIVE)
TO FRONT JACK C.B.A. P3903 P3008
TO BALLAST C.B.A. P1305 P3007
TO FRONT JACK C.B.A. P3901 P3001
TO MAIN C.B.A. P3401 P3003
TO FRONT JACK C.B.A. P3902 P3004
TO REAR JACK C.B.A. P2501 P3002

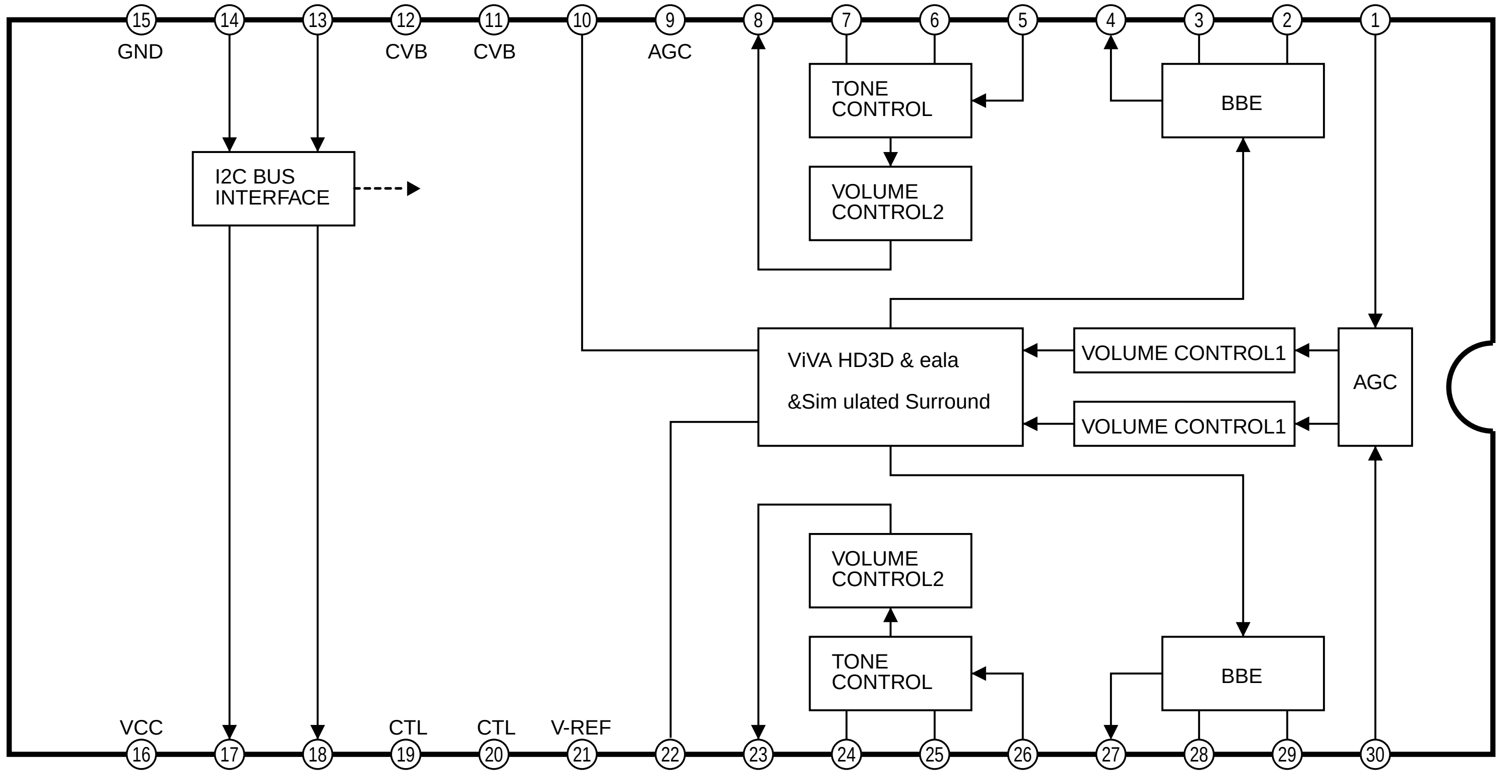
LINK TO VOLTAGE CHART

LSJB3152
BASE I SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

IC3001 DETAIL BLOCK DIAGRAM


VIDEO SWITCH
SW
LPF
6dB
LOGIC
D-DETCT
S-DETCT
BIAS
VCC(+9V) 8
VCC(+9V) 47
VCC(+9V) 53
VCC(+9V) 57
GND 18
GND 44
GND 62

IC4201 DETAIL BLOCK DIAGRAM


15 GND
14
13
12 CVB
11 CVB
10
9 AGC
8
7
6
5
4
3
2
1
TONE CONTROL
VOLUME CONTROL2
BBE
I2C BUS INTERFACE
ViVA HD3D & eala &Sim ulated Surround
VOLUME CONTROL1
VOLUME CONTROL1
AGC
VOLUME CONTROL2
TONE CONTROL
BBE
VCC 16
17
18
CTL 19
CTL 20
V-REF 21
22
23
24
25
26
27
28
29
30

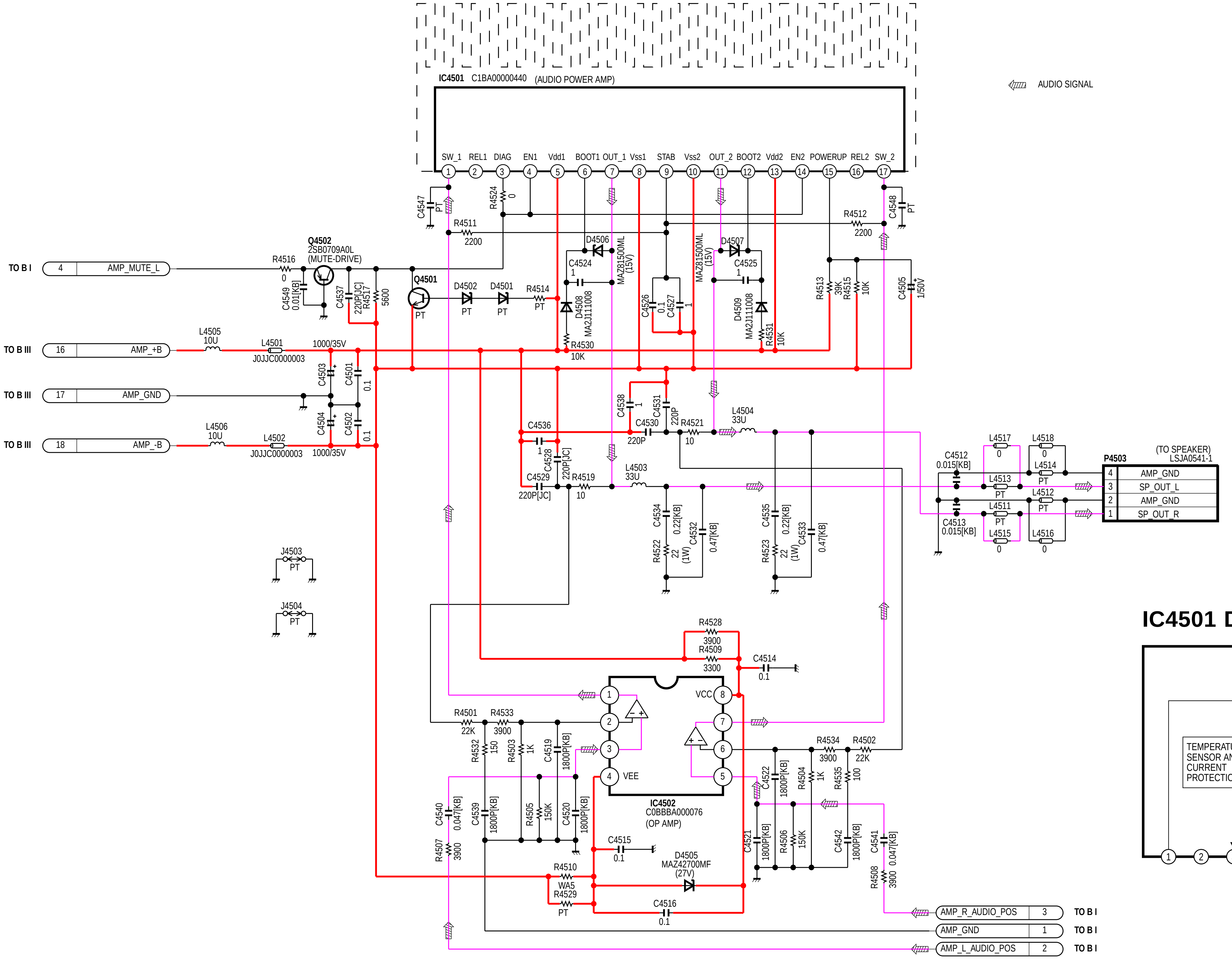
IC3001 DETAIL BLOCK DIAGRAM
IC4201 DETAIL BLOCK DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

BASE II SCHEMATIC DIAGRAM

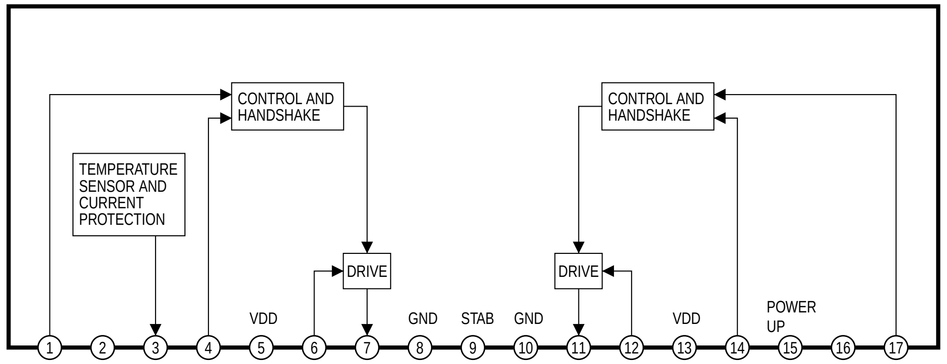
NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.


AUDIO SIGNAL
IC4501 C1BA00000440 (AUDIO POWER AMP)
SW_1 REL1 DIAG EN1 Vdd1 BOOT1 OUT_1 Vss1 STAB Vss2 OUT_2 BOOT2 Vdd2 EN2 POWERUP REL2 SW_2
TO B I 4 AMP_MUTE_L
TO B III 16 AMP_+B
TO B III 17 AMP_GND
TO B III 18 AMP_-B
Q4502 2SB0709A0L (MUTE-DRIVE)
Q4501 PT
R4516 0
C4549 0.01[KB]
C4537 220P[JC]
R4517 5600
R4511 2200
R4524 0
C4547 PT
C4548 PT
R4512 2200
D4502 PT
D4501 PT
R4514 PT
D4506 MAZ81500ML (15V)
D4507 MAZ81500ML (15V)
C4524 1
C4525 1
D4508 MA2J111008
D4509 MA2J111008
C4526 0.1
C4527 1
R4530 10K
R4531 10K
R4513 39K
R4515 10K
C4505 1/50V
L4505 10U
L4501 J0JJC0000003
1000/35V
C4503
C4501 0.1
C4504
C4502 0.1
L4506 10U
L4502 J0JJC0000003
1000/35V
C4536
C4538 1
C4531 220P
C4530 220P
R4521 10
L4504 33U
C4528 1
C4529 220P[JC]
220P[JC]
R4519 10
L4503 33U
C4534 0.22[KB]
R4522 22 (1W)
C4532 0.47[KB]
C4535 0.22[KB]
R4523 22 (1W)
C4533 0.47[KB]
C4512 0.015[KB]
C4513 0.015[KB]
L4517 0
L4518 0
L4513 PT
L4514 PT
L4511 PT
L4512 PT
L4515 0
L4516 0
P4503 (TO SPEAKER) LSJA0541-1
4 AMP_GND
3 SP_OUT_L
2 AMP_GND
1 SP_OUT_R
J4503 PT
J4504 PT
R4528 3900
R4509 3300
C4514 0.1
VCC
VEE
IC4502 C0BBBA000076 (OP AMP)
R4501 22K
R4533 3900
R4532 150
R4503 1K
C4519 1800P[KB]
R4534 3900
R4502 22K
C4522 1800P[KB]
R4504 1K
R4535 100
C4540 0.047[KB]
C4539 1800P[KB]
R4505 150K
C4520 1800P[KB]
R4507 3900
C4515 0.1
D4505 MAZ42700MF (27V)
R4510 WA5
R4529 PT
C4516 0.1
C4521 1800P[KB]
R4506 150K
C4542 1800P[KB]
C4541 0.047[KB]
R4508 3900
AMP_R_AUDIO_POS 3 TO B I
AMP_GND 1 TO B I
AMP_L_AUDIO_POS 2 TO B I

IC4501 DETAIL BLOCK DIAGRAM


CONTROL AND HANDSHAKE
CONTROL AND HANDSHAKE
TEMPERATURE SENSOR AND CURRENT PROTECTION
DRIVE
DRIVE
VDD
GND
STAB
GND
VDD
POWER UP
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

LINK TO VOLTAGE CHART

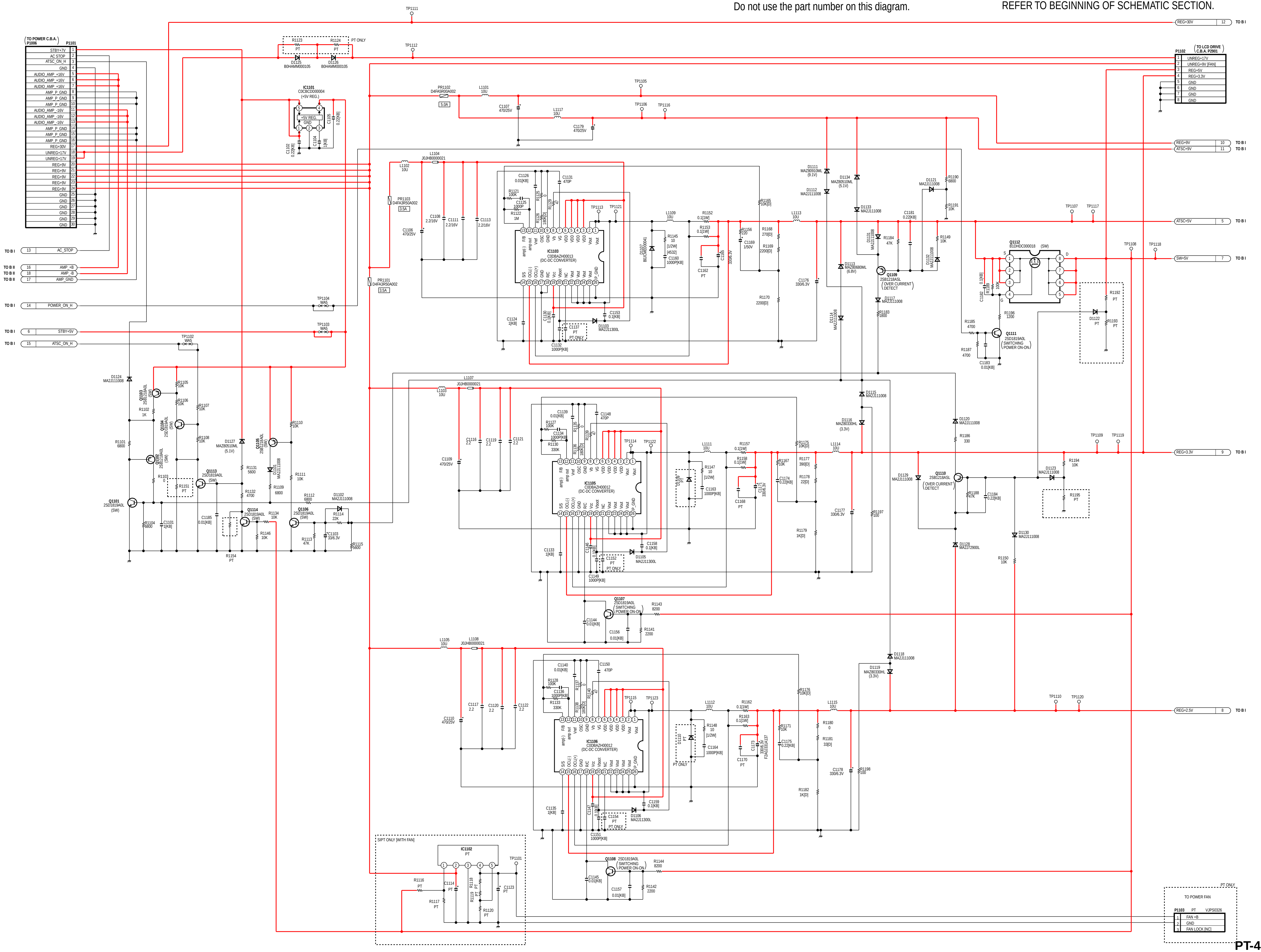
LSJB3152
BASE II SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

BASE III SCHEMATIC DIAGRAM

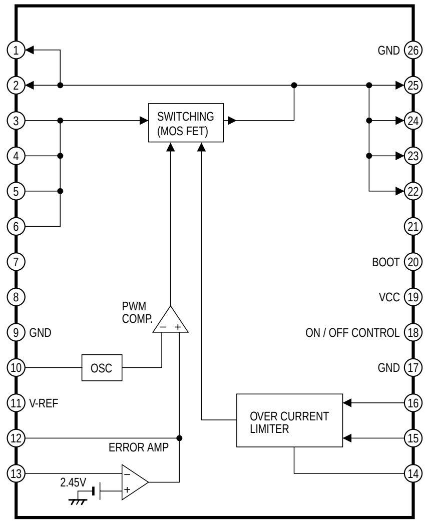
NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

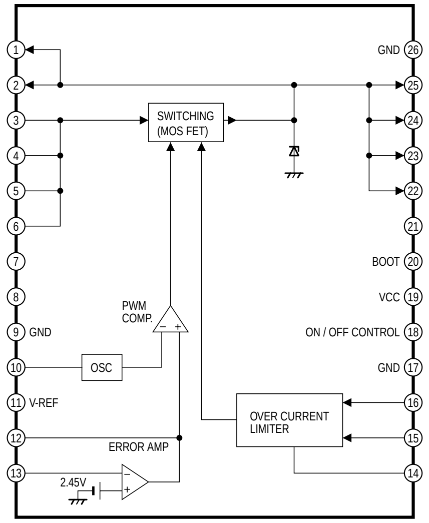
NOTE:
PARTS MARKED "PT" ARE NOT USED.


TO POWER C.B.A. P1006
P1101
STBY+7V
AC_STOP
ATSC_ON_H
AUDIO_AMP_+16V
AMP_P_GND
AUDIO_AMP_-16V
REG+30V
UNREG+17V
REG+9V
GND
TO B I
TO B II
POWER_ON_H
STBY+5V
ATSC_ON_H
IC1101
C0CBCDD00004
(+5V REG.)
IC1103
C0DBAZH00013
(DC-DC CONVERTER)
IC1105
C0DBAZH00012
(DC-DC CONVERTER)
IC1106
C0DBAZH00012
(DC-DC CONVERTER)
IC1102
PT
S/PT ONLY [WITH FAN]
Q1112
B1DHDC000018 (SW)
Q1107
2SD1819A0L
SWITCHING POWER ON-ON
Q1108
2SD1819A0L
SWITCHING POWER ON-ON
TO LCD DRIVE C.B.A. P2901
P1102
UNREG+17V
UNREG+9V (FAN)
REG+5V
REG+3.3V
GND
REG+30V
REG+9V
ATSC+9V
ATSC+5V
SW+5V
REG+3.3V
REG+2.5V
PT ONLY
TO POWER FAN
P1103
FAN +B
GND
FAN LOCK (NC)

IC1103 DETAIL BLOCK DIAGRAM


1
2
3
4
5
6
7
8
9 GND
10
11 V-REF
12
13
GND 26
25
24
23
22
21
BOOT 20
VCC 19
ON / OFF CONTROL 18
GND 17
16
15
14
SWITCHING (MOS FET)
PWM COMP.
OSC
ERROR AMP
2.45V
OVER CURRENT LIMITER

IC1105 / IC1106 DETAIL BLOCK DIAGRAM


1
2
3
4
5
6
7
8
9 GND
10
11 V-REF
12
13
GND 26
25
24
23
22
21
BOOT 20
VCC 19
ON / OFF CONTROL 18
GND 17
16
15
14
SWITCHING (MOS FET)
PWM COMP.
OSC
ERROR AMP
2.45V
OVER CURRENT LIMITER

LINK TO VOLTAGE CHART

LSJB3152
BASE III SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

12.5. POWER SCHEMATIC DIAGRAMS

POWER I SCHEMATIC DIAGRAM

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 6.3A 125V/250V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 6.3A 125V/250V

6.3A 125V/250V

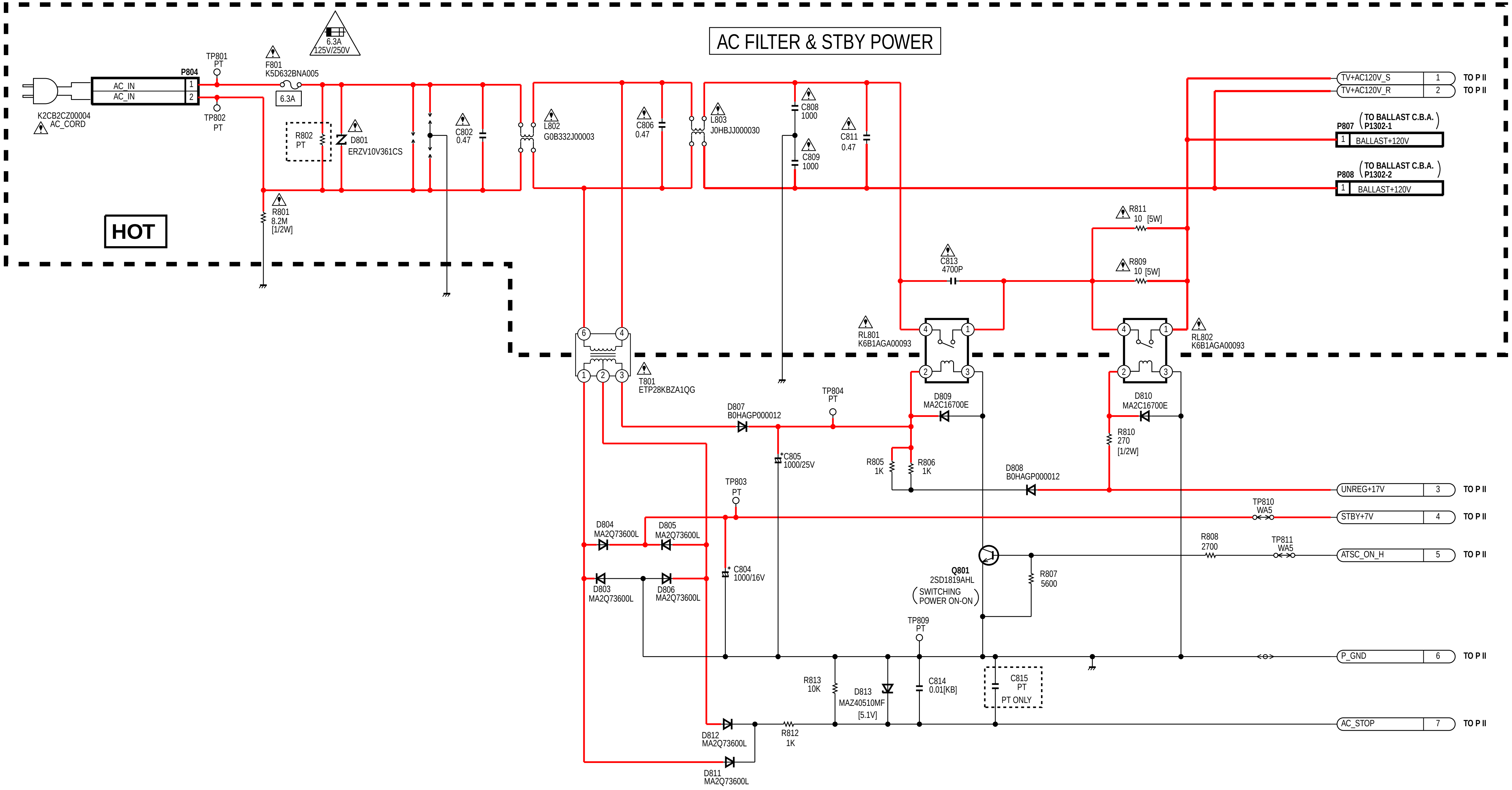
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.


AC FILTER & STBY POWER
HOT
P804
AC_IN 1
AC_IN 2
K2CB2CZ00004
AC_CORD
TP801
PT
TP802
PT
F801
K5D632BNA005
6.3A
6.3A
125V/250V
R802
PT
D801
ERZV10V361CS
R801
8.2M
[1/2W]
C802
0.47
L802
G0B332J00003
C806
0.47
L803
J0HBJJ000030
C808
1000
C809
1000
C811
0.47
TV+AC120V_S 1 TO P II
TV+AC120V_R 2 TO P II
P807 (TO BALLAST C.B.A. P1302-1)
1 BALLAST+120V
P808 (TO BALLAST C.B.A. P1302-2)
1 BALLAST+120V
R811
10 [5W]
R809
10 [5W]
C813
4700P
RL801
K6B1AGA00093
RL802
K6B1AGA00093
T801
ETP28KBZA1QG
D807
B0HAGP000012
TP804
PT
D809
MA2C16700E
D810
MA2C16700E
R810
270
[1/2W]
C805
1000/25V
R805
1K
R806
1K
D808
B0HAGP000012
UNREG+17V 3 TO P II
TP803
PT
TP810
WA5
STBY+7V 4 TO P II
D804
MA2Q73600L
D805
MA2Q73600L
R808
2700
TP811
WA5
ATSC_ON_H 5 TO P II
C804
1000/16V
Q801
2SD1819AHL
(SWITCHING POWER ON-ON)
R807
5600
D803
MA2Q73600L
D806
MA2Q73600L
TP809
PT
P_GND 6 TO P II
R813
10K
D813
MAZ40510MF
[5.1V]
C814
0.01[KB]
C815
PT
PT ONLY
D812
MA2Q73600L
R812
1K
AC_STOP 7 TO P II
D811
MA2Q73600L

LINK TO VOLTAGE CHART

LSJB3153
POWER I SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

POWER II SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

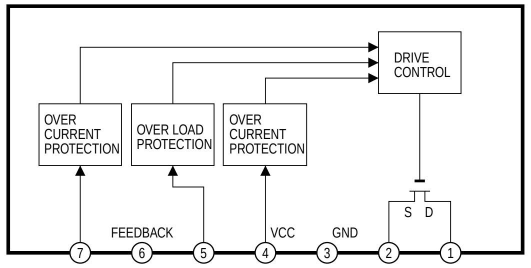
NOTE:
PARTS MARKED "PT" ARE NOT USED.

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 5A 125/250V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 5A 125/250V

5A 125/250V

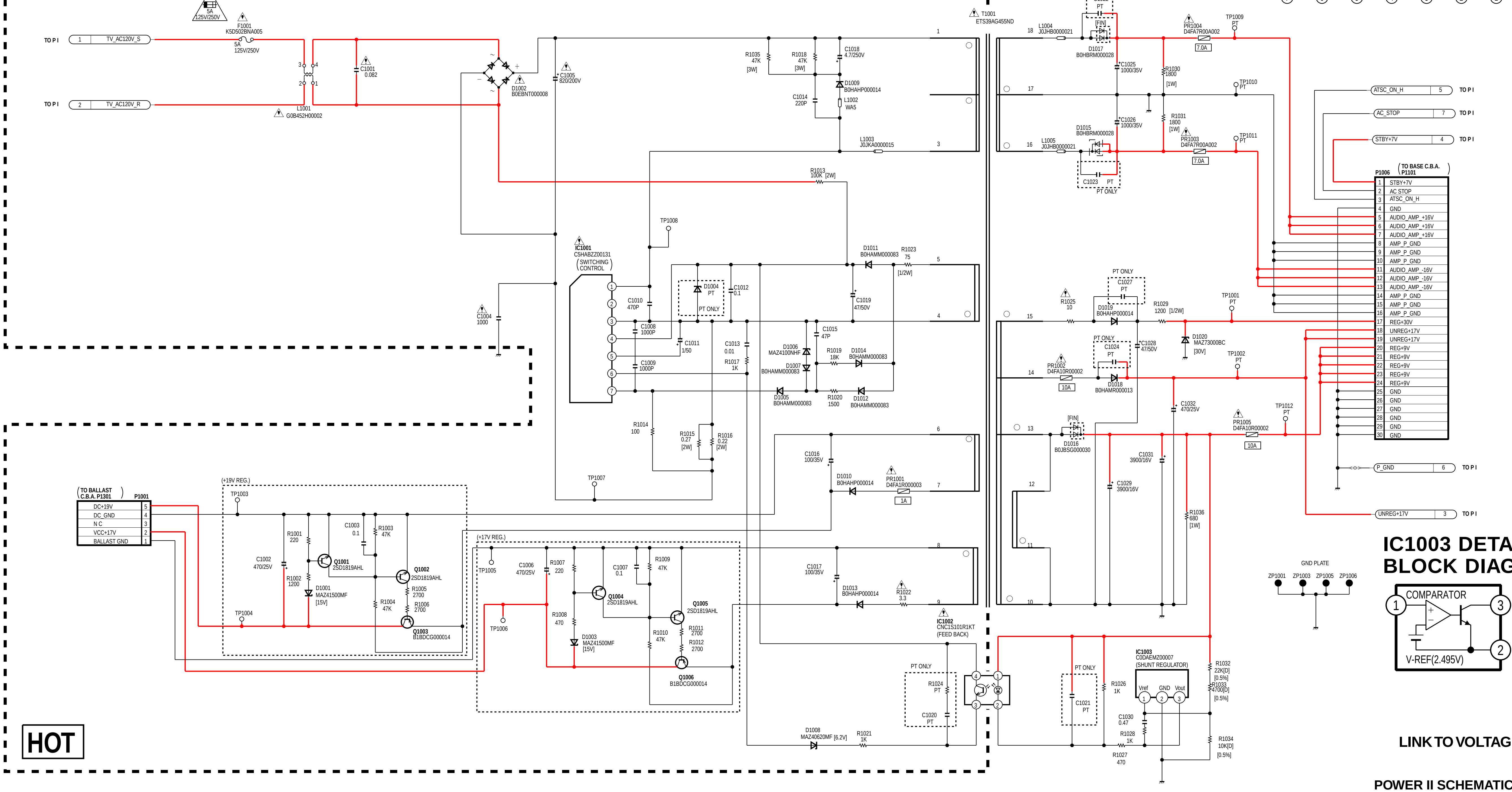
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

IC1001 DETAIL BLOCK DIAGRAM



DRIVE CONTROL
OVER CURRENT PROTECTION
OVER LOAD PROTECTION
OVER CURRENT PROTECTION
FEEDBACK
VCC
GND
S D
7
6
5
4
3
2
1

HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.



TO P I
1 TV_AC120V_S
2 TV_AC120V_R
5A 125V/250V
F1001
K5D502BNA005
5A 125V/250V
L1001
G0B452H00002
C1001 0.082
D1002 B0EBNT000008
C1005 820/200V
C1004 1000
IC1001 C5HABZZ00131 (SWITCHING CONTROL)
C1010 470P
D1004 PT
PT ONLY
C1012 0.1
C1008 1000P
C1011 1/50
C1009 1000P
C1013 0.01
R1017 1K
R1014 100
R1015 0.27 [2W]
R1016 0.22 [2W]
TP1007
TP1008
R1035 47K [3W]
R1018 47K [3W]
C1018 4.7/250V
D1009 B0HAHP000014
C1014 220P
L1002 WA5
L1003 J0JKA0000015
R1013 100K [2W]
D1011 B0HAMM000083
R1023 75 [1/2W]
C1019 47/50V
C1015 47P
D1006 MAZ4100NHF
R1019 18K
D1014 B0HAMM000083
D1007 B0HAMM000083
D1005 B0HAMM000083
R1020 1500
D1012 B0HAMM000083
C1016 100/35V
D1010 B0HAHP000014
PR1001 D4FA1R000003
1A
C1017 100/35V
D1013 B0HAHP000014
R1022 3.3
IC1002 CNC1S101R1KT (FEED BACK)
PT ONLY
R1024 PT
C1020 PT
D1008 MAZ40620MF [6.2V]
R1021 1K
T1001 ETS39AG455ND
L1004 J0JHB0000021
C1022 PT
PT ONLY
[FIN]
D1017 B0HBRM000028
C1025 1000/35V
PR1004 D4FA7R00A002
7.0A
TP1009 PT
R1030 1800 [1W]
TP1010 PT
C1026 1000/35V
D1015 B0HBRM000028
L1005 J0JHB0000021
R1031 1800 [1W]
PR1003 D4FA7R00A002
7.0A
TP1011 PT
C1023 PT
PT ONLY
R1025 10
C1027 PT
D1019 B0HAHP000014
R1029 1200 [1/2W]
TP1001 PT
D1020 MAZ73000BC [30V]
C1024 PT
C1028 47/50V
PR1002 D4FA10R00002
10A
D1018 B0HAMR000013
TP1002 PT
C1032 470/25V
TP1012 PT
PR1005 D4FA10R00002
10A
D1016 B0JBSG000030
C1031 3900/16V
C1029 3900/16V
R1036 680 [1W]
PT ONLY
C1021 PT
R1026 1K
IC1003 C0DAEMZ00007 (SHUNT REGULATOR)
Vref GND Vout
C1030 0.47
R1028 1K
R1027 470
R1032 22K[D] [0.5%]
R1033 4700[D] [0.5%]
R1034 10K[D] [0.5%]
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
TO BALLAST C.B.A. P1301
P1001
DC+19V 5
DC_GND 4
N C 3
VCC+17V 2
BALLAST GND 1
(+19V REG.)
TP1003
R1001 220
C1003 0.1
R1003 47K
C1002 470/25V
Q1001 2SD1819AHL
Q1002 2SD1819AHL
R1002 1200
D1001 MAZ41500MF [15V]
R1005 2700
R1004 47K
R1006 2700
TP1004
Q1003 B1BDCG000014
(+17V REG.)
TP1005
C1006 470/25V
R1007 220
C1007 0.1
R1009 47K
Q1004 2SD1819AHL
Q1005 2SD1819AHL
TP1006
R1008 470
D1003 MAZ41500MF [15V]
R1010 47K
R1011 2700
R1012 2700
Q1006 B1BDCG000014
ATSC_ON_H 5 TO P I
AC_STOP 7 TO P I
STBY+7V 4 TO P I
P1006 (TO BASE C.B.A. P1101)
1 STBY+7V
2 AC STOP
3 ATSC_ON_H
4 GND
5 AUDIO_AMP_+16V
6 AUDIO_AMP_+16V
7 AUDIO_AMP_+16V
8 AMP_P_GND
9 AMP_P_GND
10 AMP_P_GND
11 AUDIO_AMP_-16V
12 AUDIO_AMP_-16V
13 AUDIO_AMP_-16V
14 AMP_P_GND
15 AMP_P_GND
16 AMP_P_GND
17 REG+30V
18 UNREG+17V
19 UNREG+17V
20 REG+9V
21 REG+9V
22 REG+9V
23 REG+9V
24 REG+9V
25 GND
26 GND
27 GND
28 GND
29 GND
30 GND
P_GND 6 TO P I
UNREG+17V 3 TO P I
GND PLATE
ZP1001 ZP1003 ZP1005 ZP1006
HOT

IC1003 DETAIL BLOCK DIAGRAM

COMPARATOR
V-REF(2.495V)
1
2
3

LINK TO VOLTAGE CHART

LSJB3153
POWER II SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

12.6. BALLAST SCHEMATIC DIAGRAM

BALLAST SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

F1302 REPLACEMENT NOTE:
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE NUMBER K5C117BC0003 (117 ℃).
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE NUMÉRO K5C117BC0003 (117 ℃)

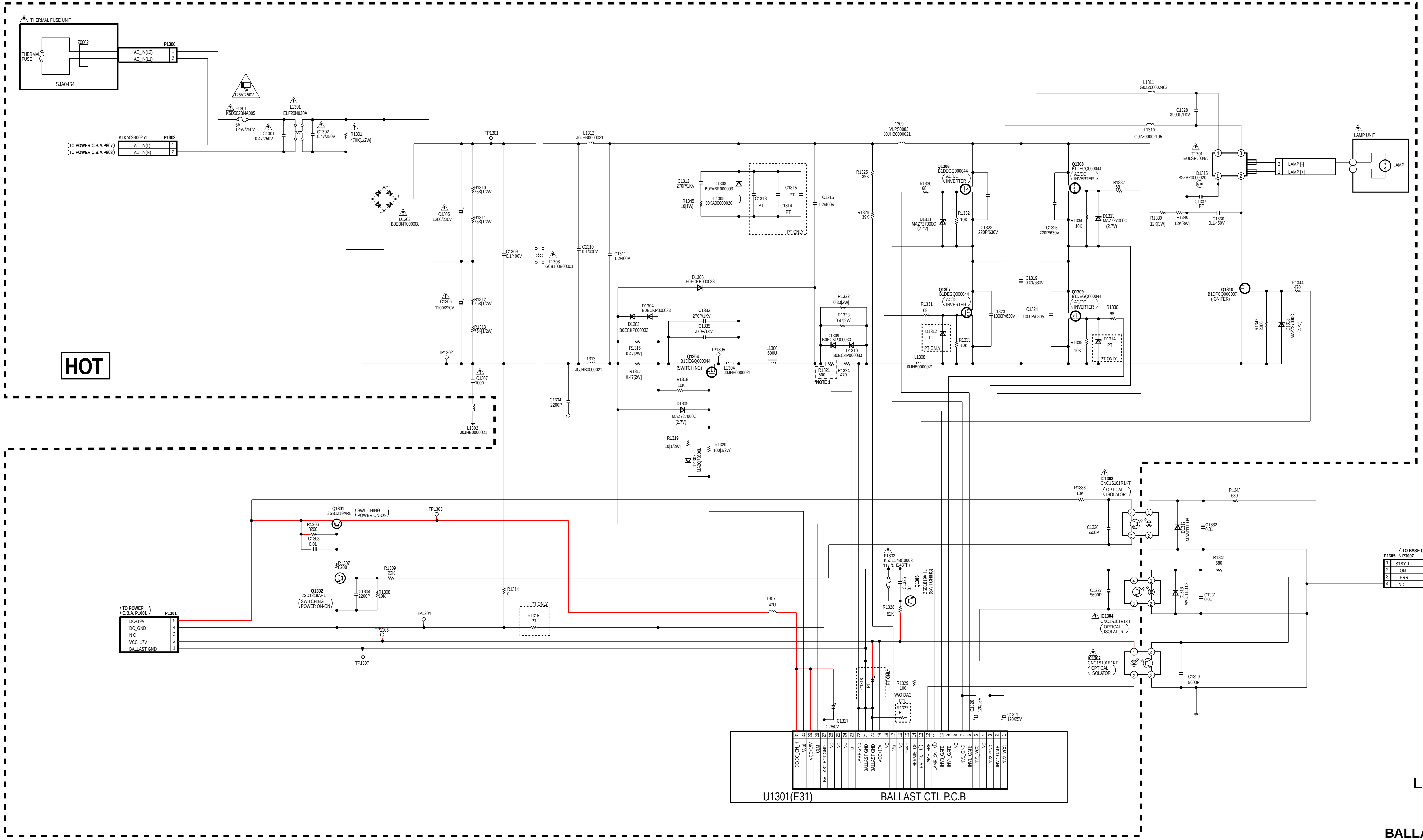
THERMAL FUSE UNIT REPLACEMENT NOTE:
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE NUMBER LSJA0464 (115℃).
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE NUMÉRO LSJA0464 (115℃)

5A 125/250V

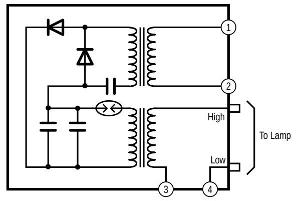
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 5A 125/250V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 5A 125/250V

***NOTE 1:**
WHEN SERVICING BALLAST C.B.A., DO NOT TURN THE VARIABLE RESISTOR
(R1321) ON THE BALLAST C.B.A.

HOT CIRCUIT. BE CAREFUL AND ISOLATION TRANSFORMER WHEN SERVICING.


THERMAL FUSE UNIT
THERMAL FUSE
Z0002
LSJA0464
P1306
AC_IN(L2)
AC_IN(L1)
F1301
K5D502BNA005
5A 125V/250V
L1301
ELF20N030A
C1301 0.47/250V
C1302 0.47/250V
R1301 470K[1/2W]
K1KA02B00251
P1302
(TO POWER C.B.A.P807)
(TO POWER C.B.A.P808)
AC_IN(L)
AC_IN(N)
D1302 B0EBNT000008
C1305 1200/220V
C1306 1200/220V
R1310 75K[1/2W]
R1311 75K[1/2W]
R1312 75K[1/2W]
R1313 75K[1/2W]
TP1301
TP1302
C1307 1000
L1302 J0JHB0000021
C1309 0.1/400V
L1303 G0B100E00001
L1312 J0JHB0000021
C1310 0.1/400V
C1311 1.2/400V
L1313 J0JHB0000021
C1334 2200P
HOT
C1312 270P/1KV
D1308 B0FABR000003
L1305 J0KA00000020
R1345 10[1W]
C1313 PT
C1315 PT
C1314 PT
PT ONLY
C1316 1.2/400V
D1306 B0ECKP000033
D1304 B0ECKP000033
D1303 B0ECKP000033
C1333 270P/1KV
C1335 270P/1KV
R1316 0.47[2W]
R1317 0.47[2W]
Q1304 B1DEGQ000044 (SWITCHING)
TP1305
L1304 J0JHB0000021
L1306 600U
R1318 10K
D1305 MAZ72700C (2.7V)
R1319 10[1/2W]
D1307 MAZ72700L
R1320 100[1/2W]
L1309 VLP50083 J0JHB0000021
R1325 39K
R1326 39K
R1322 0.33[2W]
R1323 0.47[2W]
D1309 B0ECKP000033
D1310 B0ECKP000033
R1321 500
R1324 470
*NOTE 1
Q1306 B1DEGQ000044 (AC/DC INVERTER)
R1330 68
D1311 MAZ72700C (2.7V)
R1332 10K
C1322 220P/630V
Q1307 B1DEGQ000044 (AC/DC INVERTER)
R1331 68
D1312 PT
R1333 10K
C1323 1000P/630V
L1308 J0JHB0000021
C1319 0.01/630V
L1311 G0ZZ00002482
C1328 3900P/1KV
L1310 G0ZZ00002195
Q1308 B1DEGQ000044 (AC/DC INVERTER)
R1337 68
R1334 10K
D1313 MAZ72700C (2.7V)
C1325 220P/630V
Q1309 B1DEGQ000044 (AC/DC INVERTER)
R1336 68
R1335 10K
D1314 PT
C1324 1000P/630V
T1301 EUL5P3004A
D1315 B2ZAZ0000020
C1337 PT
R1339 12K[3W]
R1340 12K[3W]
C1330 0.1/450V
Q1310 B1DFCQ000007 (IGNITER)
R1344 470
R1342 220
D1316 MAZ72700C (2.7V)
LAMP UNIT
LAMP [-]
LAMP [+]
LAMP
R1338 10K
IC1303 CNC1S101R1KT (OPTICAL ISOLATOR)
R1343 680
C1326 5600P
D1317 MAZ3111008
C1332 0.01
R1341 680
C1327 5600P
D1318 MAZ3111008
C1331 0.01
IC1304 CNC1S101R1KT (OPTICAL ISOLATOR)
IC1302 CNC1S101R1KT (OPTICAL ISOLATOR)
C1329 5600P
P1305 (TO BASE C.B.A. P3007)
STBY_L
L_ON
L_ERR
GND
Q1301 2SB1219ARL (SWITCHING POWER ON-ON)
TP1303
R1306 8200
C1303 0.01
R1307 8200
R1309 22K
Q1302 2SD1819AHL (SWITCHING POWER ON-ON)
C1304 2200P
R1308 10K
R1314 0
R1315 PT
PT ONLY
TP1304
TP1306
TP1307
(TO POWER C.B.A. P1001)
P1301
DC+19V
DC_GND
N.C
VCC+17V
BALLAST GND
L1307 47U
F1302 K5C117BC0003 117℃ (243°F)
C1336 0.1
Q1305 2SD1819AHL (SWITCHING)
R1328 82K
C1318 PT
R1329 100 W/O DAC
R1327 PT
C1317 22/50V
C1320 120/25V
C1321 120/25V
DCDC_ON_H
Vdd
VCC+19V
CLM
BALLAST HOT GND
NC
NC
IN
LAMP GND
BALLAST GND
BALLAST GND
VCC+17V
NC
Vss
NC
TEST
THERMISTOR
HI_ON
LAMP_ERR
LAMP_ON
INV1_GATE
INV4_GATE
NC
INV1_GND
INV3_GATE
INV3_VCC
NC
INV2_GND
INV2_GATE
INV2_VCC
U1301(E31)
BALLAST CTL P.C.B

T1301 DETAIL BLOCK DIAGRAM


1
2
3
4
High
Low
To Lamp

LINK TO VOLTAGE CHART

LSJB3163
BALLAST SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

12.7. LCD DRIVE SCHEMATIC DIAGRAM

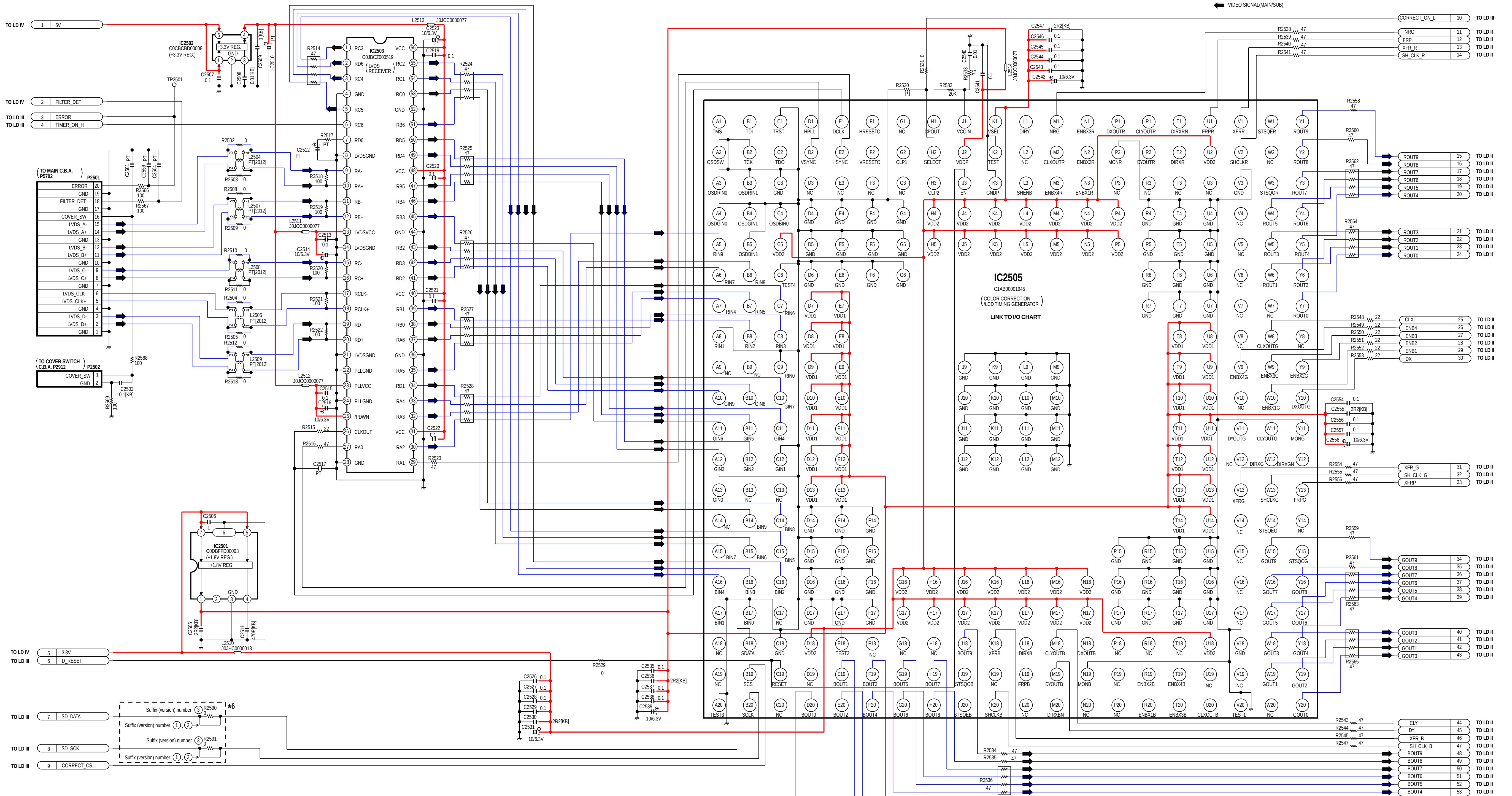
LCD DRIVE I SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

LCD DRIVE(COLOR COR.)



TO LD IV
TO LD III
TO LD II
5V
FILTER_DET
ERROR
TIMER_ON_H
TO MAIN C.B.A. P5702
P2501
TO COVER SWITCH C.B.A. P2912
P2502
COVER_SW
IC2502
C0CBCBD00008
(+3.3V REG.)
TP2501
IC2503
C0JBCZ000519
(LVDS RECEIVER)
IC2501
C0DBFFD00003
(+1.8V REG.)
+1.8V REG.
3.3V
D_RESET
SD_DATA
SD_SCK
CORRECT_CS
Suffix (version) number ③
Suffix (version) number ① ②
*6
IC2505
C1AB00001945
(COLOR CORRECTION /LCD TIMING GENERATOR)
LINK TO I/O CHART
VIDEO SIGNAL(MAIN/SUB)
CORRECT_ON_L
NRG
FRP
XFR_R
SH_CLK_R
ROUT9
ROUT8
ROUT7
ROUT6
ROUT5
ROUT4
ROUT3
ROUT2
ROUT1
ROUT0
CLX
ENB4
ENB3
ENB2
ENB1
DX
XFR_G
SH_CLK_G
XFRP
GOUT9
GOUT8
GOUT7
GOUT6
GOUT5
GOUT4
GOUT3
GOUT2
GOUT1
GOUT0
CLY
DY
XFR_B
SH_CLK_B
BOUT9
BOUT8
BOUT7
BOUT6
BOUT5
BOUT4
BOUT3
BOUT2
BOUT1
BOUT0

*6: REFER TO LCD DRIVE C.B.A. REPLACEMENT NOTE OF SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES.

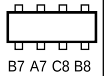
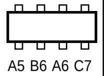
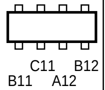
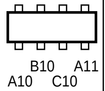
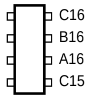
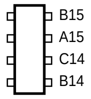
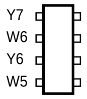
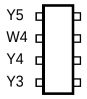
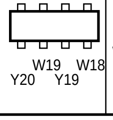
LINK TO VOLTAGE CHART

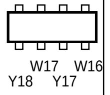
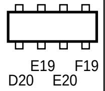
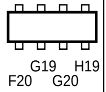
LSJB3159
LCD DRIVE I SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

I/O CHART OF IC2505

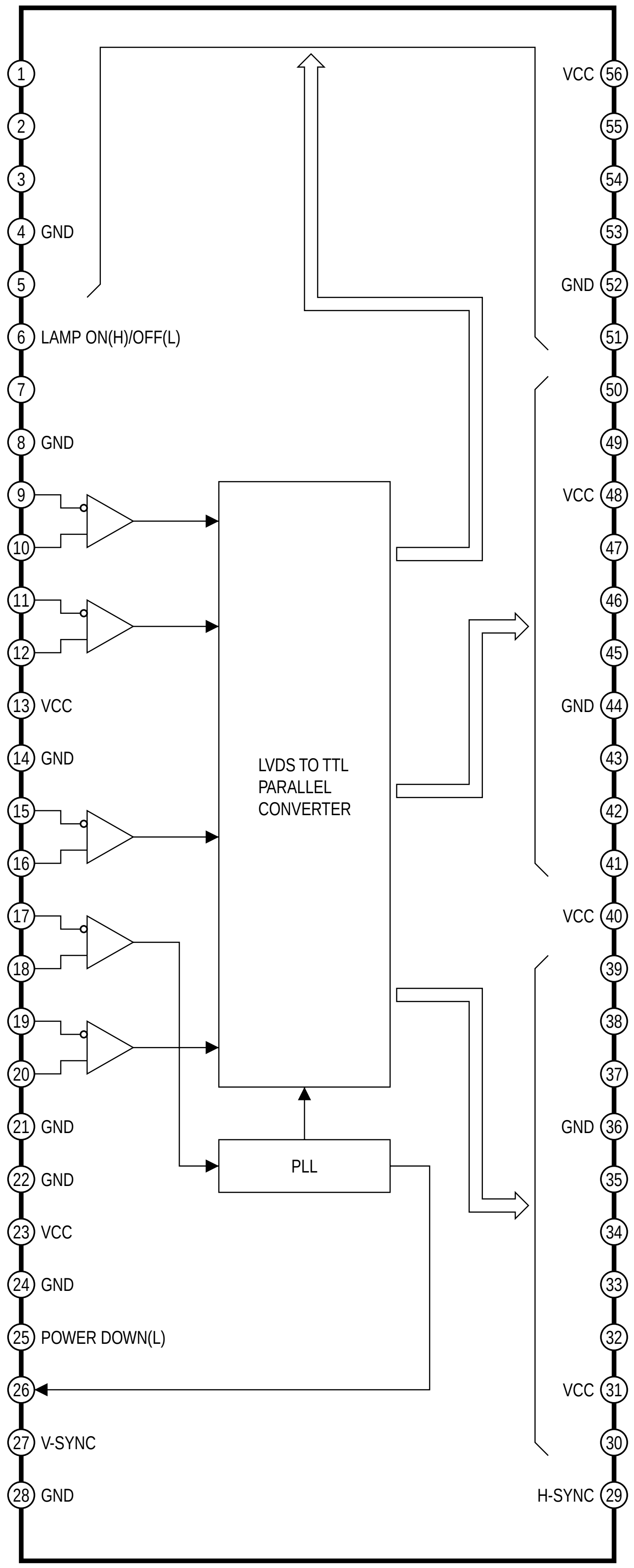
Pin No.	I/O	Signal Name	Description
A1	-	TMS	(Not used)
A2	-	OSDSW	(Not used)
A3	-	OSDRIN0	(Not used)
A4	-	OSDGIN0	(Not used)
A5	I	RIN9	R DIGITAL DATA 9
A6	I	RIN7	R DIGITAL DATA 7
A7	I	RIN4	R DIGITAL DATA 4
A8	-	RIN1	R DIGITAL DATA 1 (Not used)
A9	-	NC	(Not used)
A10	I	GIN9	G DIGITAL DATA 9
A11	I	GIN6	G DIGITAL DATA 6
A12	I	GIN3	G DIGITAL DATA 3
A13	-	GIN0	G DIGITAL DATA 0 (Not used)
A14	-	NC	(Not used)
A15	I	BIN7	B DIGITAL DATA 7
A16	I	BIN4	B DIGITAL DATA 4
A17	-	BIN1	B DIGITAL DATA 1 (Not used)
A18	-	NC	(Not used)
A19	-	NC	(Not used)
A20	-	TEST3	(Not used)
B1	-	TDI	(Not used)
B2	-	TCK	(Not used)
B3	-	OSDRIN1	(Not used)
B4	-	OSDGIN1	(Not used)
B5	-	OSDBIN1	(Not used)
B6	I	RIN8	R DIGITAL DATA 8
B7	I	RIN5	R DIGITAL DATA 5
B8	I	RIN2	R DIGITAL DATA 2
B9	-	NC	(Not used)
B10	I	GIN8	G DIGITAL DATA 8
B11	I	GIN5	G DIGITAL DATA 5
B12	I	GIN2	G DIGITAL DATA 2
B13	-	NC	(Not used)
B14	I	BIN9	B DIGITAL DATA 9
B15	I	BIN6	B DIGITAL DATA 6
B16	I	BIN3	B DIGITAL DATA 3
B17	-	BIN0	B DIGITAL DATA 0 (Not used)
B18	I	SDATA	SERIAL DATA
B19	I	SCS	CS(L)
B20	I	SCLK	SERIAL CLOCK
C1	-	TRST	(Not used)
C2	-	TDO	(Not used)
C3	-	GND	GND
C4	-	OSDBIN0	(Not used)
C5	I	VDD2	VDD(+3.3V)
C6	-	TEST4	(Not used)
C7	I	RIN6	R DIGITAL DATA 6
C8	I	RIN3	R DIGITAL DATA 3
C9	-	RIN0	R DIGITAL DATA 0 (Not used)
C10	I	GIN7	G DIGITAL DATA 7
C11	I	GIN4	G DIGITAL DATA 4
C12	-	GIN1	G DIGITAL DATA 1 (Not used)
C13	-	NC	(Not used)
C14	I	BIN8	B DIGITAL DATA 8
C15	I	BIN5	B DIGITAL DATA 5
C16	I	BIN2	B DIGITAL DATA 2
C17	-	NC	(Not used)
C18	-	GND	GND
C19	I	RESET	RESET(L)
C20	-	NC	(Not used)
D1	-	HPLL	(Not used)
D2	I	VSYNC	V-SYNC
D3	-	NC	(Not used)
D4	-	GND	GND
D5	-	GND	GND
D6	-	GND	GND
D7	I	VDD1	VDD(+1.8V)
D8	I	VDD1	VDD(+1.8V)
D9	I	VDD1	VDD(+1.8V)
D10	I	VDD1	VDD(+1.8V)
D11	I	VDD1	VDD(+1.8V)
D12	I	VDD1	VDD(+1.8V)
D13	I	VDD1	VDD(+1.8V)
D14	-	GND	GND
D15	-	GND	GND
D16	-	GND	GND
D17	-	GND	GND
D18	I	VDD2	VDD(+3..3V)
D19	-	NC	(Not used)
D20	O	BOUT0	B DIGITAL DATA 0
E1	I	DCLK	SYSTEM CLOCK
E2	I	HSYNC	H-SYNC
E3	-	NC	(Not used)
E4	-	GND	GND
E5	-	GND	GND
E6	-	GND	GND
E7	I	VDD1	VDD(+1.8V)
E8	I	VDD1	VDD(+1.8V)
E9	I	VDD1	VDD(+1.8V)
E10	I	VDD1	VDD(+1.8V)
E11	I	VDD1	VDD(+1.8V)
E12	I	VDD1	VDD(+1.8V)
E13	I	VDD1	VDD(+1.8V)
E14	-	GND	GND
E15	-	GND	GND
E16	-	GND	GND
E17	-	GND	GND
E18	-	TEST2	(Not used)
E19	O	BOUT1	B DIGITAL DATA 1
E20	O	BOUT2	B DIGITAL DATA 2
F1	-	HRESETO	(Not used)
F2	-	VRESETO	(Not used)
F3	-	NC	(Not used)
F4	-	GND	GND
F5	-	GND	GND
F6	-	GND	GND
F14	-	GND	GND
F15	-	GND	GND
F16	-	GND	GND
F17	-	GND	GND
F18	-	NC	(Not used)
F19	O	BOUT3	B DIGITAL DATA 3
F20	O	BOUT4	B DIGITAL DATA 4
G1	-	NC	(Not used)
G2	-	CLP1	(Not used)
G3	-	NC	(Not used)
G4	-	GND	GND
G5	-	GND	GND
G6	-	GND	GND
G16	I	VDD2	VDD(+3..3V)
G17	I	VDD2	VDD(+3..3V)
G18	-	NC	(Not used)
G19	O	BOUT5	B DIGITAL DATA 5
G20	O	BOUT6	B DIGITAL DATA 6
H1	O	CPOUT	PLL PHASE COMP
H2	I	SELECT	NON-UNIFORMITY COLOR CORRECT ON(L)
H3	-	CLP2	(Not used)
H4	I	VDD2	VDD(+3..3V)
H5	I	VDD2	VDD(+3..3V)
H16	I	VDD2	VDD(+3..3V)
H17	I	VDD2	VDD(+3..3V)
H18	-	NC	(Not used)
H19	O	BOUT7	B DIGITAL DATA 7
H20	O	BOUT8	B DIGITAL DATA 8
J1	I	VCOIN	PLL OSC CONTROL
J2	I	VDDP	VDD(+1.8V)
J3	I	EN	PLL ENABLE (L)
J4	I	VDD2	VDD(+3..3V)
J5	I	VDD2	VDD(+3..3V)
J9	-	GND	GND
J10	-	GND	GND
J11	-	GND	GND
J12	-	GND	GND
J16	I	VDD2	VDD(+3..3V)
J17	I	VDD2	VDD(+3..3V)
J18	O	BOUT9	B DIGITAL DATA 9
J19	-	STSQOB	(Not used)
J20	-	STSQEB	(Not used)
K1	-	VSEL	(Not used)
K2	-	TEST	(Not used)
K3	-	GNDP	GND
K4	I	VDD2	VDD(+3..3V)
K5	I	VDD2	VDD(+3..3V)
K9	-	GND	GND
K10	-	GND	GND
K11	-	GND	GND
K12	-	GND	GND
K16	I	VDD2	VDD(+3..3V)
K17	I	VDD2	VDD(+3..3V)
K18	O	XFRB	TIMING SIGNAL FOR SAMPLING HOLD(B)
K19	-	NC	(Not used)
K20	O	SHCLKB	CLOCK FOR SAMPLING HOLD(B)
L1	-	DIRY	(Not used)
L2	-	NC	(Not used)
L3	-	SHENB	(Not used)
L4	I	VDD2	VDD(+3..3V)
L5	I	VDD2	VDD(+3..3V)
L9	-	GND	GND
L10	-	GND	GND
L11	-	GND	GND
L12	-	GND	GND
L16	I	VDD2	VDD(+3..3V)
L17	I	VDD2	VDD(+3..3V)
L18	-	DIRXB	(Not used)
L19	-	FRPB	(Not used)
L20	-	NC	(Not used)
M1	O	NRG	DRIVE PULSE FOR LCD PANEL
M2	-	CLXOUTR	(Not used)
M3	-	ENBX4R	(Not used)
M4	I	VDD2	VDD(+3..3V)
M5	I	VDD2	VDD(+3..3V)
M9	-	GND	GND
M10	-	GND	GND
M11	-	GND	GND
M12	-	GND	GND
M16	I	VDD2	VDD(+3..3V)
M17	I	VDD2	VDD(+3..3V)
M18	O	CLYOUTB	TRANSMISSION CLOCK FOR LCD(B) <Y DIRECTION>
M19	O	DYOUTB	SHIFT DATA FOR LCD(B) <Y DIRECTION>
M20	-	DIRXBN	(Not used)
N1	-	ENBX3R	(Not used)
N2	-	ENBX2R	(Not used)
N3	-	ENBX1R	(Not used)
N4	I	VDD2	VDD(+3..3V)
N5	I	VDD2	VDD(+3..3V)
N16	I	VDD2	VDD(+3..3V)
N17	I	VDD2	VDD(+3..3V)
N18	-	DXOUTB	(Not used)
N19	-	MONB	(Not used)
N20	-	NC	(Not used)
P1	-	DXOUTR	(Not used)
P2	-	MONR	(Not used)
P3	-	NC	(Not used)
P4	I	VDD2	VDD(+3..3V)
P5	I	VDD2	VDD(+3..3V)
P15	-	GND	GND
P16	-	GND	GND
P17	-	GND	GND
P18	-	NC	(Not used)
P19	-	NC	(Not used)
P20	-	NC	(Not used)
R1	-	CLYOUTR	(Not used)
R2	-	DYOUTR	(Not used)
R3	-	NC	(Not used)
R4	-	GND	GND
R5	-	GND	GND
R6	-	GND	GND
R7	-	GND	GND
R15	-	GND	GND
R16	-	GND	GND
R17	-	GND	GND
R18	-	NC	(Not used)
R19	-	ENBX2B	(Not used)
R20	-	ENBX1B	(Not used)
T1	-	DIRXRN	(Not used)
T2	-	DIRXR	(Not used)
T3	-	NC	(Not used)
T4	-	GND	GND
T5	-	GND	GND
T6	-	GND	GND
T7	-	GND	GND
T8	I	VDD1	VDD(+1.8V)
T9	I	VDD1	VDD(+1.8V)
T10	I	VDD1	VDD(+1.8V)
T11	I	VDD1	VDD(+1.8V)
T12	I	VDD1	VDD(+1.8V)
T13	I	VDD1	VDD(+1.8V)
T14	I	VDD1	VDD(+1.8V)
T15	-	GND	GND
T16	-	GND	GND
T17	-	GND	GND
T18	-	NC	(Not used)
T19	-	ENBX4B	(Not used)
T20	-	ENBX3B	(Not used)
U1	O	FRPR	POLARITY REVERSE PULSE FOR (R, B) SIGNAL
U2	I	VDD2	VDD(+3..3V)
U3	-	NC	(Not used)
U4	-	GND	GND
U5	-	GND	GND
U6	-	GND	GND
U7	-	GND	GND
U8	I	VDD1	VDD(+1.8V)
U9	I	VDD1	VDD(+1.8V)
U10	I	VDD1	VDD(+1.8V)
U11	I	VDD1	VDD(+1.8V)
U12	I	VDD1	VDD(+1.8V)
U13	I	VDD1	VDD(+1.8V)
U14	I	VDD1	VDD(+1.8V)
U15	-	GND	GND
U16	-	GND	GND
U17	-	GND	GND
U18	I	VDD2	VDD(+3..3V)
U19	-	NC	(Not used)
U20	-	CLXOUTB	(Not used)
V1	O	XFRR	CLOCK FOR SAMPLING HOLD(R)
V2	O	SHCLKR	TIMING SIGNAL FOR SAMPLING HOLD(R)
V3	-	GND	GND
V4	-	NC	(Not used)
V5	-	NC	(Not used)
V6	-	NC	(Not used)
V7	-	NC	(Not used)
V8	-	NC	(Not used)
V9	O	ENB4XG	ENABLE PULSE 4 FOR LCD(G)
V10	-	NC	(Not used)
V11	-	DYOUTG	(Not used)
V12	-	NC	(Not used)
V13	O	XFRG	TIMING SIGNAL FOR SAMPLING HOLD(R)
V14	-	NC	(Not used)
V15	-	NC	(Not used)
V16	-	NC	(Not used)
V17	-	NC	(Not used)
V18	-	GND	GND
V19	-	NC	(Not used)
V20	-	TEST1	(Not used)
W1	-	STSQER	(Not used)
W2	-	NC	(Not used)
W3	-	STSQOR	(Not used)
W4	O	ROUT5	R DIGITAL DATA 5
W5	O	ROUT3	R DIGITAL DATA 3
W6	O	ROUT1	R DIGITAL DATA 1
W7	-	NC	(Not used)
W8	O	CLXOUTG	TRANSMISSION CLOCK FOR LCD(G) <X DIRECTION>
W9	O	ENBX3G	ENABLE PULSE 3 FOR LCD(G)
W10	O	ENBX1G	ENABLE PULSE 1 FOR LCD(G)
W11	-	CLYOUTG	(Not used)
W12	-	DIRXG	(Not used)
W13	O	SHCLKG	CLOCK FOR SAMPLING HOLD(G)
W14	-	STSQEG	(Not used)
W15	O	GOUT9	G DIGITAL DATA 9
W16	O	GOUT7	G DIGITAL DATA 7
W17	O	GOUT5	G DIGITAL DATA 5
W18	O	GOUT3	G DIGITAL DATA 3
W19	O	GOUT1	G DIGITAL DATA 1
W20	-	NC	(Not used)
Y1	O	ROUT9	R DIGITAL DATA 9
Y2	O	ROUT8	R DIGITAL DATA 8
Y3	O	ROUT7	R DIGITAL DATA 7
Y4	O	ROUT6	R DIGITAL DATA 6
Y5	O	ROUT4	R DIGITAL DATA 4
Y6	O	ROUT2	R DIGITAL DATA 2
Y7	O	ROUT0	R DIGITAL DATA 0
Y8	-	NC	(Not used)
Y9	O	ENBX2G	ENABLE PULSE 2 FOR LCD(G)
Y10	O	DXOUTG	SHIFT DATA FOR LCD(G) <X DIRECTION>
Y11	-	MONG	(Not used)
Y12	-	DIRXGN	(Not used)
Y13	O	FRPG	POLARITY REVERSE PULSE FOR (G) SIGNAL
Y14	-	NC	(Not used)
Y15	-	STSQOG	(Not used)
Y16	O	GOUT8	G DIGITAL DATA 8
Y17	O	GOUT6	G DIGITAL DATA 6
Y18	O	GOUT4	G DIGITAL DATA 4
Y19	O	GOUT2	G DIGITAL DATA 2
Y20	O	GOUT0	G DIGITAL DATA 0

CHECKING POINT OF IC2505

Pin	Name	Voltage	Check Point	WF No.	Remarks
B8	RIN2	0.4	R2527 (LOWER) 	WF108	FOIL SIDE
C8	RIN3	1.5			
A7	RIN4	0.2			
B7	RIN5	0.3			
C7	RIN6	0.3	R2528 (LOWER) 		FOIL SIDE
A6	RIN7	0.7			
B6	RIN8	0.6			
A5	RIN9	0.9			
B12	GIN2	0.4	R2525 (LOWER)  C11 B12 B11 A12	WF109	FOIL SIDE
A12	GIN3	1.5			
C11	GIN4	0.3			
B11	GIN5	0.3			
A11	GIN6	0.3	R2526 (LOWER)  B10 A11 A10 C10		FOIL SIDE
C10	GIN7	0.8			
B10	GIN8	0.5			
A10	GIN9	0.9			
C16	BIN2	0.5	R2514 (RIGHT)  C16 B16 A16 C15	WF110	FOIL SIDE
B16	BIN3	1.5			
A16	BIN4	0.3			
C15	BIN5	0.4			
B15	BIN6	0.4	R2524 (RIGHT)  B15 A15 C14 B14		FOIL SIDE
A15	BIN7	0.8			
C14	BIN8	0.7			
B14	BIN9	0.8			
Y7	ROUT0	1.1	R2564 (LEFT) 	WF114	FOIL SIDE
W6	ROUT1	0.6			
Y6	ROUT2	0.7			
W5	ROUT3	1.4			
Y5	ROUT4	1.4	R2562 (LEFT) 		FOIL SIDE
W4	ROUT5	1.0			
Y4	ROUT6	0.6			
Y3	ROUT7	0.6			
Y2	ROUT8	1.1	R2560 (UPPER)		FOIL SIDE
Y1	ROUT9	1.0	R2558 (UPPER)		FOIL SIDE
Y20	GOUT0	0.5	R2565 (LOWER)  W19 W18 Y20 Y19	WF115	FOIL SIDE
W19	GOUT1	0.5			
Y19	GOUT2	1.3			
W18	GOUT3	0.8			

Pin	Name	Voltage	Check Point	WF No.	Remarks
Y18	GOUT4	1.0	R2563 (LOWER)  W17 W16 Y18 Y17	WF115	FOIL SIDE
W17	GOUT5	1.1			
Y17	GOUT6	0.9			
W16	GOUT7	0.9			
Y16	GOUT8	0.6	R2561 (LOWER)		FOIL SIDE
W15	GOUT9	1.0	R2559 (LOWER)		FOIL SIDE
D20	BOUT0	1.3	R2537 (LOWER)  E19 F19 D20 E20	WF116	FOIL SIDE
E19	BOUT1	0.5			
E20	BOUT2	1.1			
F19	BOUT3	1.4			
F20	BOUT4	0.6	R2536 (LOWER)  G19 H19 F20 G20		FOIL SIDE
G19	BOUT5	0.5			
G20	BOUT6	1.1			
H19	BOUT7	1.0			
H20	BOUT8	0.6	R2535 (LOWER)		FOIL SIDE
J18	BOUT9	1.2	R2534 (LOWER)		FOIL SIDE
B18	SDATA	3.4	R2357 (UPPER)	WF124	FOIL SIDE
B19	SCS	3.2	R2407 (LOWER)	—	COMPONENT SIDE
B20	SCLK	3.4	R2354 (UPPER)	WF125	FOIL SIDE
C19	RESET	3.4	R2529 (RIGHT)	—	FOIL SIDE
D2	VSYNC	3.4	R2516 (LOWER)	WF112	FOIL SIDE
E2	HSYNC	3.1	R2523 (LOWER)	WF111	FOIL SIDE
E1	DCLK	1.5	R2515 (LOWER)	WF113	FOIL SIDE
D7 D8 D9 ⋮ etc.	VDD1	1.9	Pin 1 of IC2501	—	COMPONENT SIDE
C5 D18 G16 ⋮ etc.	VDD2	3.5	L2510 (LEFT)	—	COMPONENT SIDE

IC2503 DETAIL BLOCK DIAGRAM


1
2
3
4 GND
5
6 LAMP ON(H)/OFF(L)
7
8 GND
9
10
11
12
13 VCC
14 GND
15
16
17
18
19
20
21 GND
22 GND
23 VCC
24 GND
25 POWER DOWN(L)
26
27 V-SYNC
28 GND
VCC 56
55
54
53
GND 52
51
50
49
VCC 48
47
46
45
GND 44
43
42
41
VCC 40
39
38
37
GND 36
35
34
33
32
VCC 31
30
H-SYNC 29
LVDS TO TTL PARALLEL CONVERTER
PLL

CHECKING POINT OF IC2505
IC2503 DETAIL BLOCK DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

LCD DRIVE II SCHEMATIC DIAGRAM

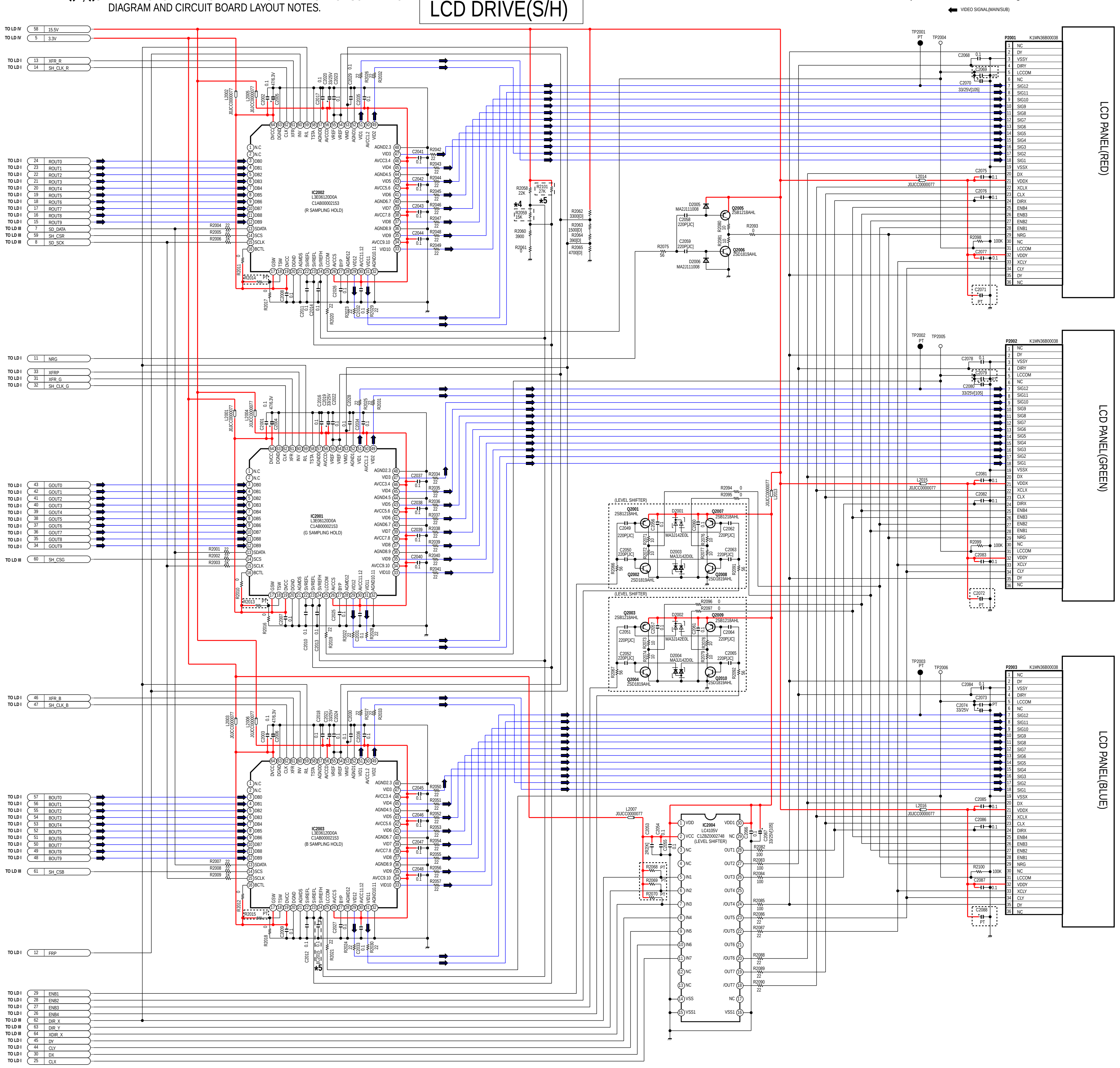
★4, ★5: REFER TO LCD DRIVE C.B.A. REPLACEMENT NOTE OF SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES.

LCD DRIVE(S/H)

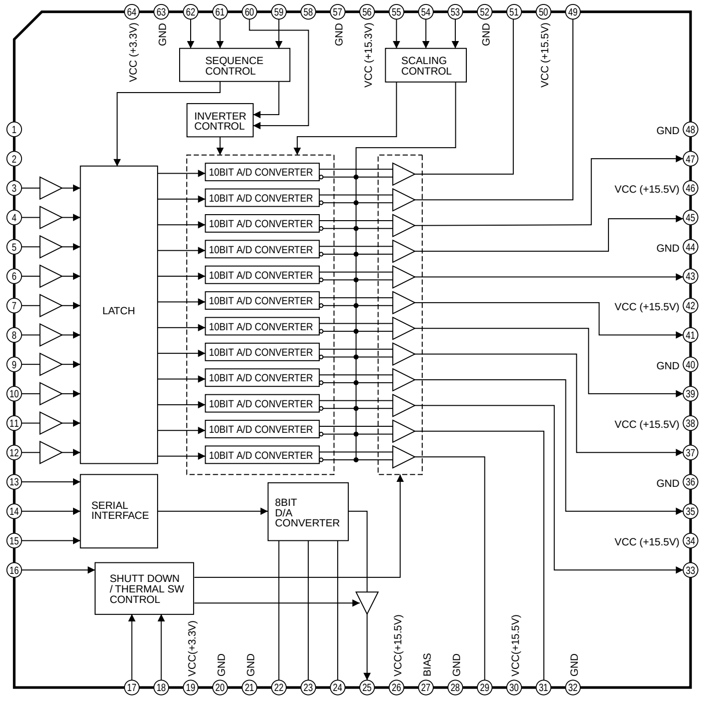
NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

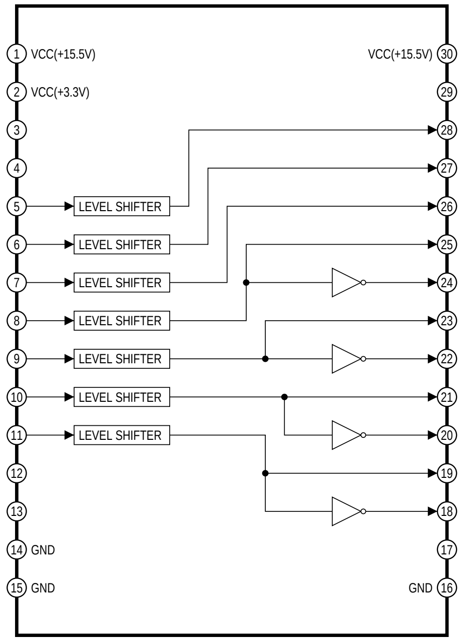
NOTE:
PARTS MARKED "PT" ARE NOT USED.


VIDEO SIGNAL(MAIN/SUB)
IC2002 (R SAMPLING HOLD)
IC2001 (G SAMPLING HOLD)
IC2003 (B SAMPLING HOLD)
IC2004 LC4105V (LEVEL SHIFTER)
(LEVEL SHIFTER)
LCD PANEL(RED)
LCD PANEL(GREEN)
LCD PANEL(BLUE)
P2001
P2002
P2003

IC2001 / IC2002 / IC2003 DETAIL BLOCK DIAGRAM


SEQUENCE CONTROL
SCALING CONTROL
INVERTER CONTROL
LATCH
10BIT A/D CONVERTER
SERIAL INTERFACE
8BIT D/A CONVERTER
SHUTT DOWN / THERMAL SW CONTROL
VCC (+3.3V)
GND
VCC (+15.5V)
VCC(+15.5V)
BIAS

IC2004 DETAIL BLOCK DIAGRAM


VCC(+15.5V)
VCC(+3.3V)
LEVEL SHIFTER
GND

LINK TO VOLTAGE CHART

LSJB3159
LCD DRIVE II SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

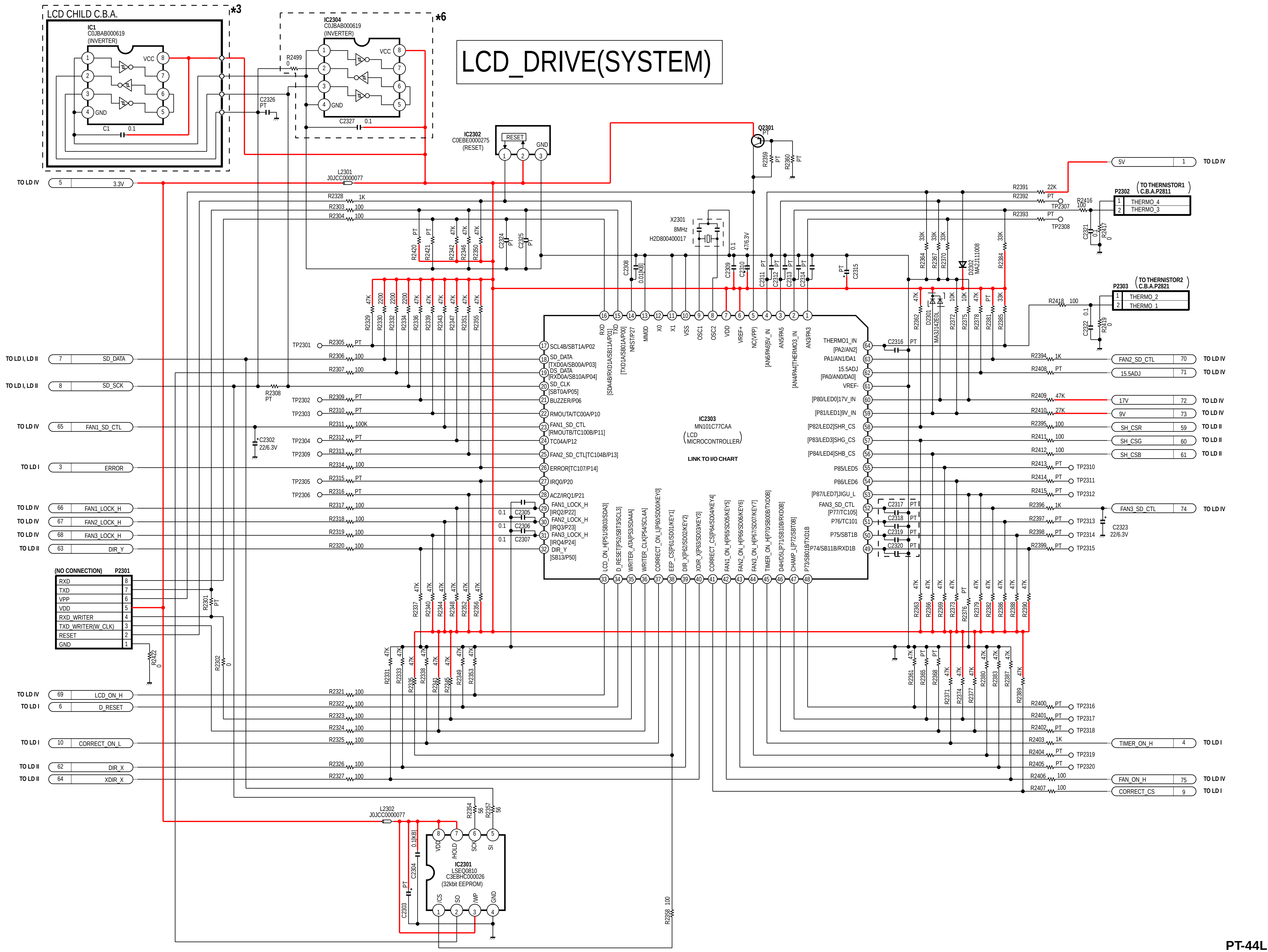
LCD DRIVE III SCHEMATIC DIAGRAM

*3, *6: REFER TO LCD DRIVE C.B.A. REPLACEMENT NOTE OF SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES.

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.


LCD CHILD C.B.A.
*3
IC1
C0JBAB000619
(INVERTER)
*6
IC2304
C0JBAB000619
(INVERTER)
LCD_DRIVE(SYSTEM)
IC2302
C0EBE0000275
(RESET)
Q2301
L2301
J0JCC0000077
X2301
8MHz
H2D800400017
IC2303
MN101C77CAA
(LCD MICROCONTROLLER)
LINK TO I/O CHART
P2302
(TO THERMISTOR1 C.B.A.P2811)
THERMO_4
THERMO_3
P2303
(TO THERMISTOR2 C.B.A.P2821)
THERMO_2
THERMO_1
(NO CONNECTION) P2301
RXD
TXD
VPP
VDD
RXD_WRITER
TXD_WRITER(W_CLK)
RESET
GND
TO LD IV 5 3.3V
TO LD I, LD II 7 SD_DATA
TO LD I, LD II 8 SD_SCK
TO LD IV 65 FAN1_SD_CTL
TO LD I 3 ERROR
TO LD IV 66 FAN1_LOCK_H
TO LD IV 67 FAN2_LOCK_H
TO LD IV 68 FAN3_LOCK_H
TO LD II 63 DIR_Y
TO LD IV 69 LCD_ON_H
TO LD I 6 D_RESET
TO LD I 10 CORRECT_ON_L
TO LD II 62 DIR_X
TO LD II 64 XDIR_X
5V 1 TO LD IV
FAN2_SD_CTL 70 TO LD IV
15.5ADJ 71 TO LD IV
17V 72 TO LD IV
9V 73 TO LD IV
SH_CSR 59 TO LD II
SH_CSG 60 TO LD II
SH_CSB 61 TO LD II
FAN3_SD_CTL 74 TO LD IV
TIMER_ON_H 4 TO LD I
FAN_ON_H 75 TO LD IV
CORRECT_CS 9 TO LD I
L2302
J0JCC0000077
IC2301
L5EQ0810
C3EBHC000026
(32kbit EEPROM)

LINK TO VOLTAGE CHART

I/O CHART OF IC2303

Pin No.	I/O	Signal Name	Description
1	-	AN3 / PA3	(Not used)
2	I	THERMO3_IN	TEMPERATURE DATA3 (FROM THERMISTOR 1 C. B. A.)
3	-	AN5 / PA5	(Not used)
4	I	5V_IN	+5V LINE DETECT ✻1
5	-	NC	(Not used)
6	I	VREF+	V-REF FOR IC2303
7	I	VDD	VDD (+3.3V)
8	O	OSC2	8MHz OSCILLATION
9	I	OSC1	8MHz OSCILLATION
10	-	VSS	GND
11	-	X1	(Not used)
12	-	X0	(Not used)
13	-	MMOD	(Not used)
14	I	NRST	RESET (L)
15	O	TXD	RS232C TRANSMITTED DATA
16	I	RXD	RS232C RECEIVED DATA
17	-	SCL	(Not used)
18	O	SD_DATA	SERIAL DATA 0
19	I	DS_DATA	SERIAL DATA 1
20	O	SD_LOCK	SERIAL CLOCK
21	-	BUZZER	(Not used)
22	-	RMOUTA	(Not used)
23	O	FAN1_SD_CTL	FAN1 SPEED CONTROL
24	-	TCO4A / P12	(Not used)
25	-	FAN2_SD_CTL	(Not used)
26	O	ERROR	LCD DRIVE ERROR INFORMATION
27	-	IRQ0 / P20	(Not used)
28	-	ACZ / IRQ1 / P21	(Not used)
29	I	FAN1_LOCK_H	FAN1 LOCK (H)
30	I	FAN2_LOCK_H	FAN2 LOCK (H)
31	I	FAN3_LOCK_H	FAN3 LOCK (H)
32	O	DIR_Y	LCD REVERSE (UP / DOWN) CONTROL
33	O	LCD_ON_H	+15.5V (LCD DRIVE) ON (H)
34	O	D_RESET	RESET (L)
35	-	WRITER_ATA	(Not used)
36	-	WRITER_CLK	(Not used)
37	O	CORRECT_ON_L	NON-UNIFORMITY COLOR CORRECT ON (L)
38	O	EEP_CS	EEPROM CS (L)
39	O	DIR_X	LCD REVERSE (L/R) CONTROL
40	O	XDIR_X	INVERTED LCD REVERSE (L/R) CONTROL
41	O	CORRECT_CS	COLOR CORRECTION CS (L)
42	O	FAN1_ON_H	FAN1 ON (H)
43	O	FAN2_ON_H	FAN2 ON (H)
44	O	FAN3_ON_H	FAN3 ON (H)
45	I	TIMER_ON_H	LAMP ON (H) / OFF (L)
46	-	D4H / D5L	(Not used)
47	-	CHAMP_L	(Not used)
48	-	P73 / SB01B / TXD18	(Not used)
49	-	THERMO_IN	(Not used)
50	-	PA1 / AN1 / DA1	(Not used)
51	-	15.5ADJ	(Not used)
52	O	VREF-	FAN3 SPEED CONTROL
53	-	17V_IN	(Not used)
54	-	14V_IN	(Not used)
55	-	SHR_CS	(Not used)
56	O	SHG_CS	SAMPLING HOLD BLUE CS (L)
57	O	SHB_CS	SAMPLING HOLD GREEN CS (L)
58	O	P85 / LED5	SAMPLING HOLD RED CS (L)
59	I	P86 / LED6	+9V LINE DETECT ✻1
60	I	JIGU_L	+17V LINE DETECT ✻1
61	-	FAN3_SD_CTL	(Not used)
62	-	P76 / TC101	(Not used)
63	O	P75 / SBT18	FAN2 SPEED CONTROL
64	I	P74 / SB11B / RXD1B	TEMPERATURE DATA 1 (FROM THERMISTOR 2 C. B. A)

✻1

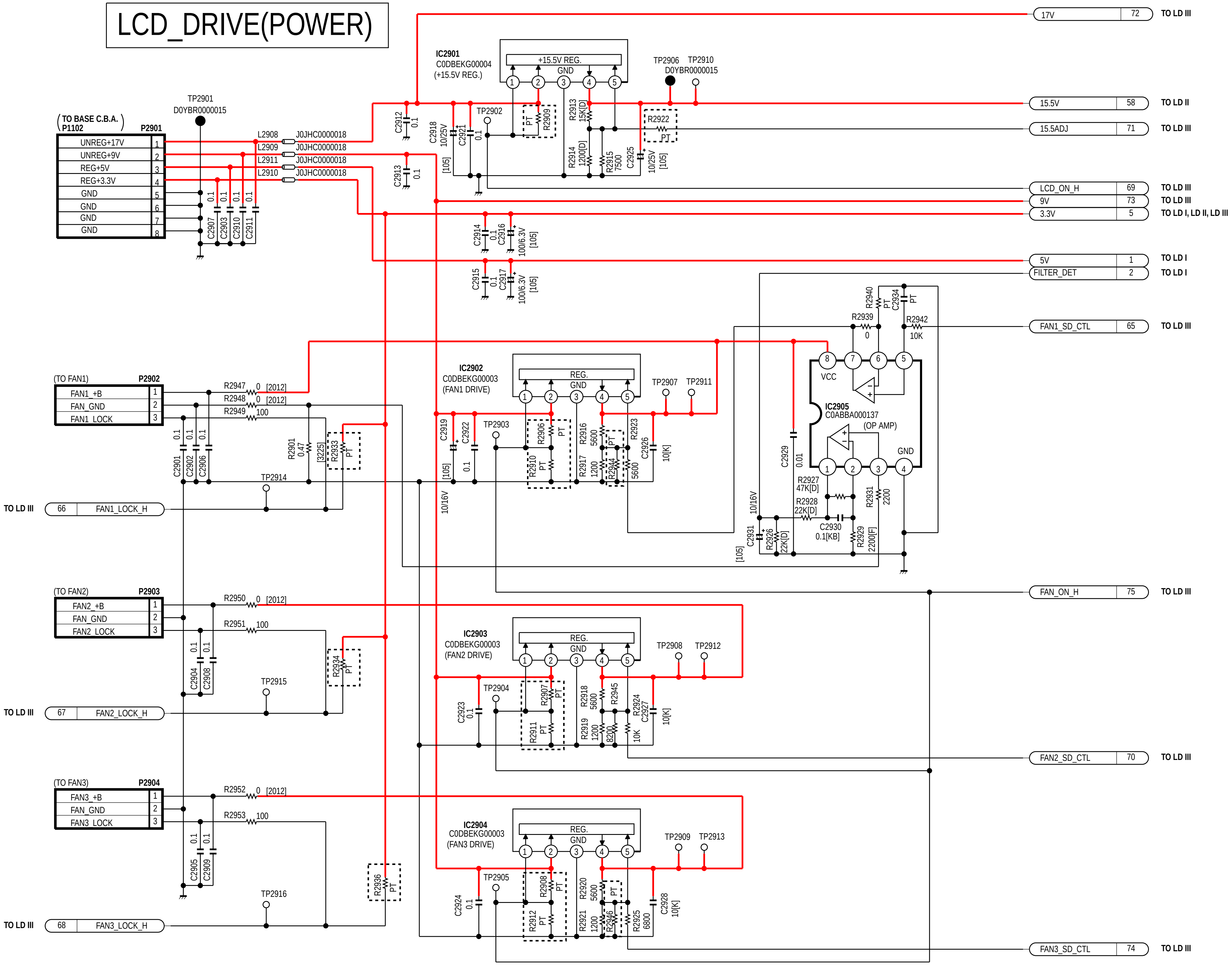
Pin No.	Description
4	VOLTAGE DETECTION FOR ERROR LED INDICATION WHEN THE VOLTAGE BECOMES LESS THAN 2.5V.
59	VOLTAGE DETECTION FOR ERROR LED INDICATION WHEN THE VOLTAGE BECOMES LESS THAN 6.5V.
60	VOLTAGE DETECTION FOR ERROR LED INDICATION WHEN THE VOLTAGE BECOMES LESS THAN 12V.

LCD DRIVE IV SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.


LCD_DRIVE(POWER)
TO BASE C.B.A.
P1102
P2901
UNREG+17V
UNREG+9V
REG+5V
REG+3.3V
GND
TP2901
D0YBR0000015
L2908 J0JHC0000018
L2909 J0JHC0000018
L2911 J0JHC0000018
L2910 J0JHC0000018
C2907 C2903 C2910 C2911
IC2901
C0DBEKG00004
(+15.5V REG.)
+15.5V REG.
GND
TP2902
TP2906 TP2910
D0YBR0000015
R2913 15K[D]
R2914 1200[D]
R2915 7500
R2909 PT
R2922 PT
C2912 0.1
C2913 0.1
C2918 10/25V [105]
C2921 0.1
C2925 10/25V [105]
C2914 0.1
C2916 100/6.3V [105]
C2915 0.1
C2917 100/6.3V [105]
17V 72 TO LD III
15.5V 58 TO LD II
15.5ADJ 71 TO LD III
LCD_ON_H 69 TO LD III
9V 73 TO LD III
3.3V 5 TO LD I, LD II, LD III
5V 1 TO LD I
FILTER_DET 2 TO LD I
FAN1_SD_CTL 65 TO LD III
FAN_ON_H 75 TO LD III
FAN2_SD_CTL 70 TO LD III
FAN3_SD_CTL 74 TO LD III
(TO FAN1)
P2902
FAN1_+B
FAN_GND
FAN1_LOCK
R2947 0 [2012]
R2948 0 [2012]
R2949 100
C2901 C2902 C2906 0.1
R2901 0.47 [3225]
R2933 PT
TP2914
TO LD III 66 FAN1_LOCK_H
IC2902
C0DBEKG00003
(FAN1 DRIVE)
REG.
GND
TP2903
TP2907 TP2911
C2919 10/16V [105]
C2922 0.1
R2906 PT
R2910 PT
R2916 5600
R2917 1200
R2944 PT
R2923 5600
C2926 10[K]
IC2905
C0ABBA000137
(OP AMP)
VCC
GND
R2939 0
R2940 PT
C2934 PT
R2942 10K
C2929 0.01
R2927 47K[D]
R2928 22K[D]
C2930 0.1[KB]
R2931 2200
R2929 2200[F]
C2931 10/16V [105]
R2926 22K[D]
(TO FAN2)
P2903
FAN2_+B
FAN_GND
FAN2_LOCK
R2950 0 [2012]
R2951 100
C2904 C2908 0.1
R2934 PT
TP2915
TO LD III 67 FAN2_LOCK_H
IC2903
C0DBEKG00003
(FAN2 DRIVE)
TP2904
TP2908 TP2912
C2923 0.1
R2907 PT
R2911 PT
R2918 5600
R2919 1200
R2945 8200
R2924 10K
C2927 10[K]
(TO FAN3)
P2904
FAN3_+B
FAN_GND
FAN3_LOCK
R2952 0 [2012]
R2953 100
C2905 C2909 0.1
R2936 PT
TP2916
TO LD III 68 FAN3_LOCK_H
IC2904
C0DBEKG00003
(FAN3 DRIVE)
TP2905
TP2909 TP2913
C2924 0.1
R2908 PT
R2912 PT
R2920 5600
R2921 1200
R2946 PT
R2925 6800
C2928 10[K]

LINK TO VOLTAGE CHART

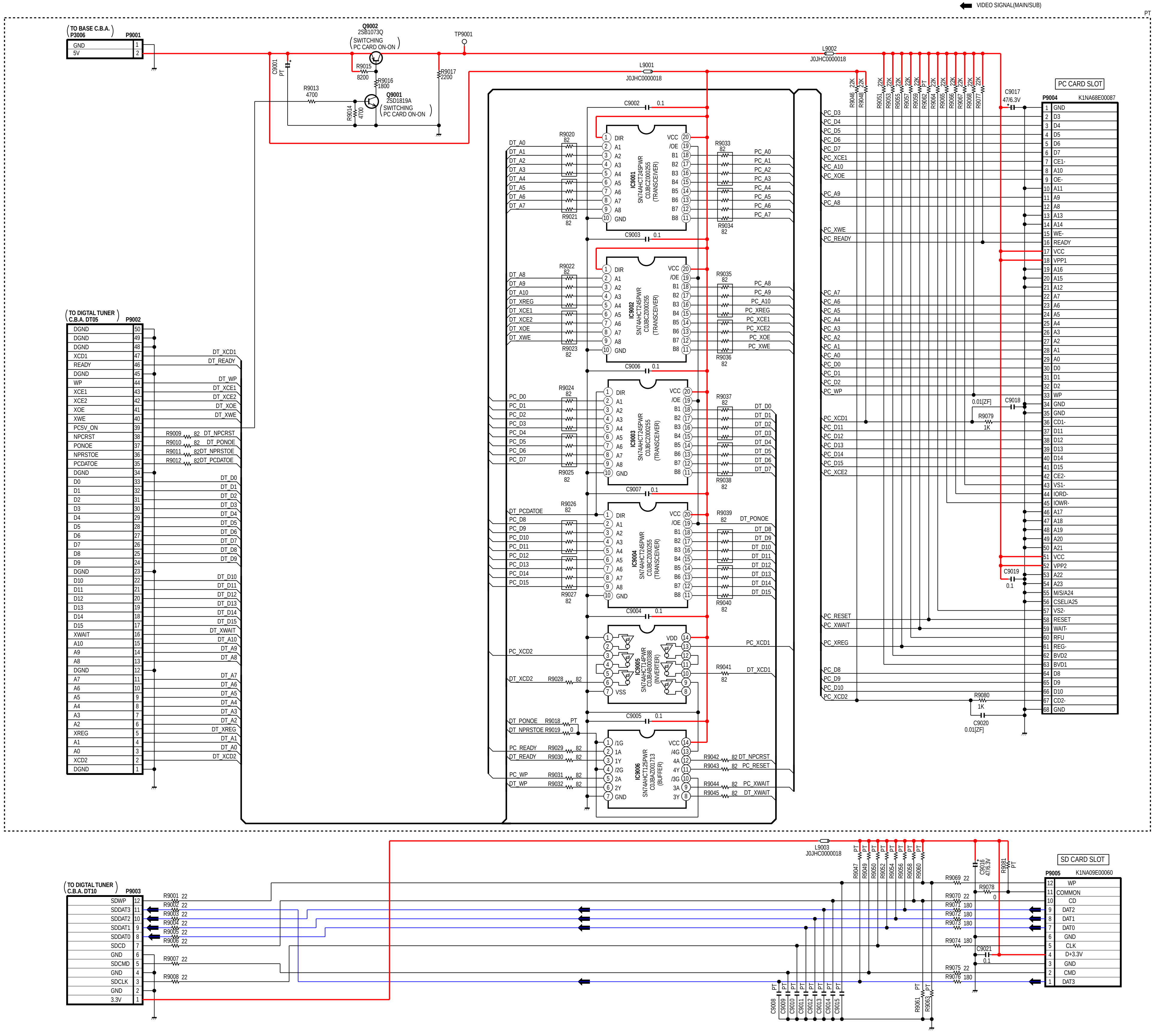
12.8. CARD SCHEMATIC DIAGRAM

CARD SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.


VIDEO SIGNAL(MAIN/SUB)
TO BASE C.B.A. P3006
P9001
GND
5V
Q9002 2SB1073Q (SWITCHING PC CARD ON-ON)
Q9001 2SD1819A (SWITCHING PC CARD ON-ON)
TP9001
L9001 J0JHC0000018
L9002 J0JHC0000018
L9003 J0JHC0000018
IC9001 SN74AHCT245PWR C0JBCZ000255 (TRANSCEIVER)
IC9002 SN74AHCT245PWR C0JBCZ000255 (TRANSCEIVER)
IC9003 SN74AHCT245PWR C0JBCZ000255 (TRANSCEIVER)
IC9004 SN74AHCT245PWR C0JBCZ000255 (TRANSCEIVER)
IC9005 SN74AHCT14PWR C0JBAB000598 (INVERTER)
IC9006 SN74AHCT125PWR C0JBAZ001713 (BUFFER)
TO DIGITAL TUNER C.B.A. DT05
P9002
TO DIGITAL TUNER C.B.A. DT10
P9003
PC CARD SLOT
P9004 K1NA68E00087
SD CARD SLOT
P9005 K1NA09E00060
PT

LSJB3161
CARD SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

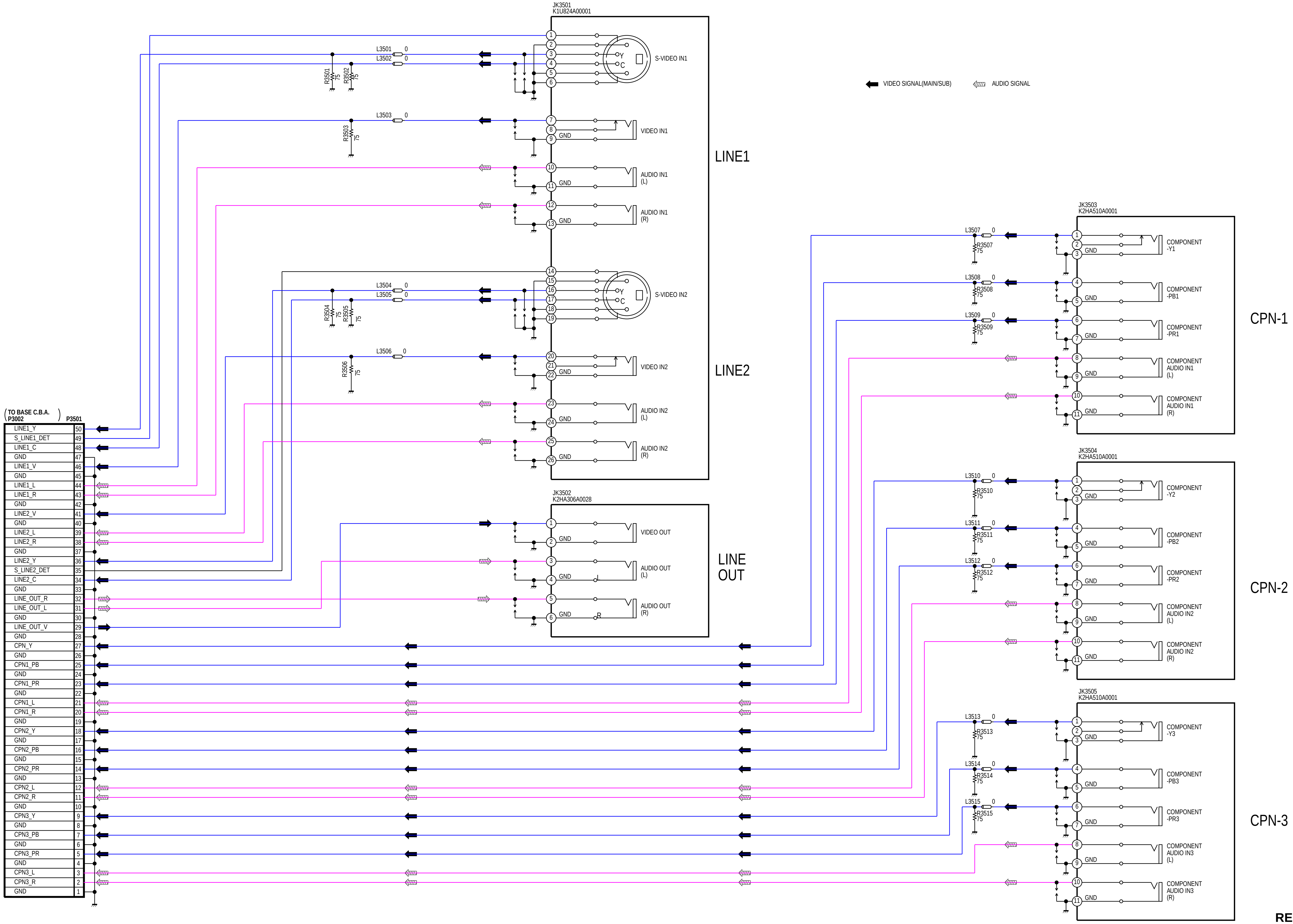
12.9. REAR JACK SCHEMATIC DIAGRAM

REAR JACK SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.


JK3501
K1U824A00001
S-VIDEO IN1
VIDEO IN1
AUDIO IN1 (L)
AUDIO IN1 (R)
S-VIDEO IN2
VIDEO IN2
AUDIO IN2 (L)
AUDIO IN2 (R)
LINE1
LINE2
JK3502
K2HA306A0028
VIDEO OUT
AUDIO OUT (L)
AUDIO OUT (R)
LINE OUT
VIDEO SIGNAL(MAIN/SUB)
AUDIO SIGNAL
JK3503
K2HA510A0001
COMPONENT -Y1
COMPONENT -PB1
COMPONENT -PR1
COMPONENT AUDIO IN1 (L)
COMPONENT AUDIO IN1 (R)
CPN-1
JK3504
K2HA510A0001
COMPONENT -Y2
COMPONENT -PB2
COMPONENT -PR2
COMPONENT AUDIO IN2 (L)
COMPONENT AUDIO IN2 (R)
CPN-2
JK3505
K2HA510A0001
COMPONENT -Y3
COMPONENT -PB3
COMPONENT -PR3
COMPONENT AUDIO IN3 (L)
COMPONENT AUDIO IN3 (R)
CPN-3
L3501 0
L3502 0
L3503 0
L3504 0
L3505 0
L3506 0
L3507 0
L3508 0
L3509 0
L3510 0
L3511 0
L3512 0
L3513 0
L3514 0
L3515 0
R3501 75
R3502 75
R3503 75
R3504 75
R3505 75
R3506 75
R3507 75
R3508 75
R3509 75
R3510 75
R3511 75
R3512 75
R3513 75
R3514 75
R3515 75
GND
Y
C
(TO BASE C.B.A. P3002)
P3501
LINE1_Y 50
S_LINE1_DET 49
LINE1_C 48
GND 47
LINE1_V 46
GND 45
LINE1_L 44
LINE1_R 43
GND 42
LINE2_V 41
GND 40
LINE2_L 39
LINE2_R 38
GND 37
LINE2_Y 36
S_LINE2_DET 35
LINE2_C 34
GND 33
LINE_OUT_R 32
LINE_OUT_L 31
GND 30
LINE_OUT_V 29
GND 28
CPN_Y 27
GND 26
CPN1_PB 25
GND 24
CPN1_PR 23
GND 22
CPN1_L 21
CPN1_R 20
GND 19
CPN2_Y 18
GND 17
CPN2_PB 16
GND 15
CPN2_PR 14
GND 13
CPN2_L 12
CPN2_R 11
GND 10
CPN3_Y 9
GND 8
CPN3_PB 7
GND 6
CPN3_PR 5
GND 4
CPN3_L 3
CPN3_R 2
GND 1

LSJB3154
REAR JACK SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

12.10. FRONT JACK SCHEMATIC DIAGRAM

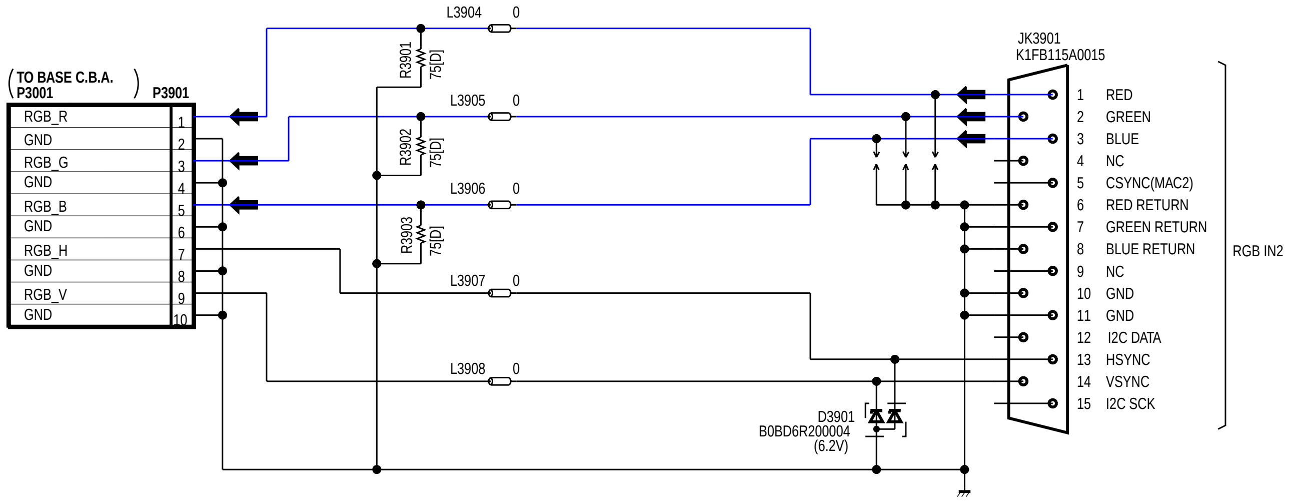
FRONT JACK SCHEMATIC DIAGRAM

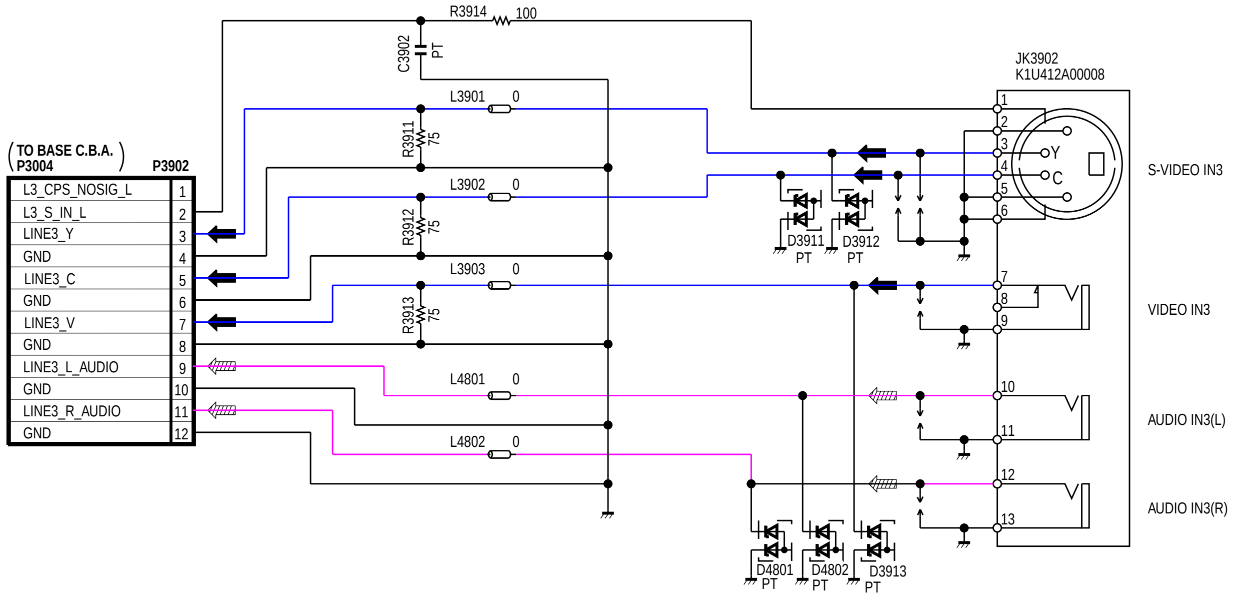
NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

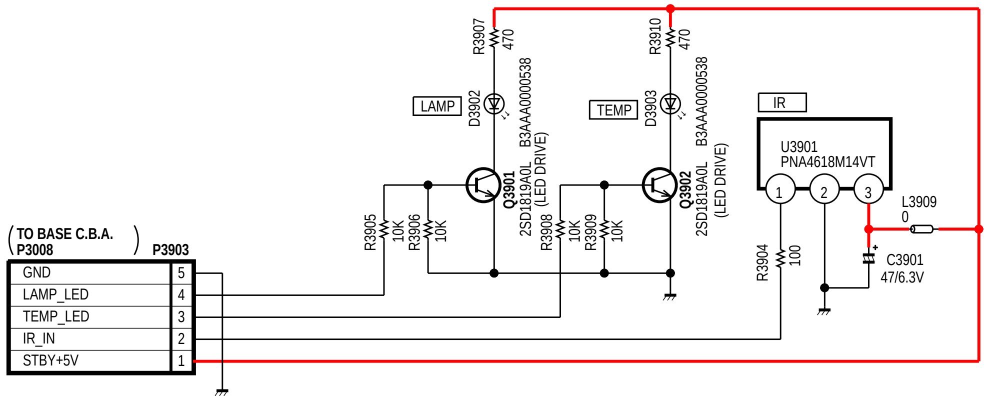
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

⬅ VIDEO SIGNAL(MAIN/SUB) ▨ AUDIO SIGNAL


TO BASE C.B.A.
P3001
P3901
RGB_R 1
GND 2
RGB_G 3
GND 4
RGB_B 5
GND 6
RGB_H 7
GND 8
RGB_V 9
GND 10
L3904 0
L3905 0
L3906 0
L3907 0
L3908 0
R3901 75[D]
R3902 75[D]
R3903 75[D]
JK3901
K1FB115A0015
1 RED
2 GREEN
3 BLUE
4 NC
5 CSYNC(MAC2)
6 RED RETURN
7 GREEN RETURN
8 BLUE RETURN
9 NC
10 GND
11 GND
12 I2C DATA
13 HSYNC
14 VSYNC
15 I2C SCK
RGB IN2
D3901
B0BD6R200004
(6.2V)


TO BASE C.B.A.
P3004
P3902
L3_CPS_NOSIG_L 1
L3_S_IN_L 2
LINE3_Y 3
GND 4
LINE3_C 5
GND 6
LINE3_V 7
GND 8
LINE3_L_AUDIO 9
GND 10
LINE3_R_AUDIO 11
GND 12
R3914 100
C3902 PT
L3901 0
L3902 0
L3903 0
L4801 0
L4802 0
R3911 75
R3912 75
R3913 75
JK3902
K1U412A00008
Y
C
S-VIDEO IN3
VIDEO IN3
AUDIO IN3(L)
AUDIO IN3(R)
D3911 PT
D3912 PT
D4801 PT
D4802 PT
D3913 PT


TO BASE C.B.A.
P3008
P3903
GND 5
LAMP_LED 4
TEMP_LED 3
IR_IN 2
STBY+5V 1
R3907 470
R3910 470
LAMP
TEMP
IR
D3902 B3AA0000538
D3903 B3AA0000538
Q3901 2SD1819A0L (LED DRIVE)
Q3902 2SD1819A0L (LED DRIVE)
R3905 10K
R3906 10K
R3908 10K
R3909 10K
U3901
PNA4618M14VT
L3909 0
R3904 100
C3901 47/6.3V

LINK TO VOLTAGE CHART

LSJB3155
FRONT JACK SCHEMATIC DIAGRAM
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

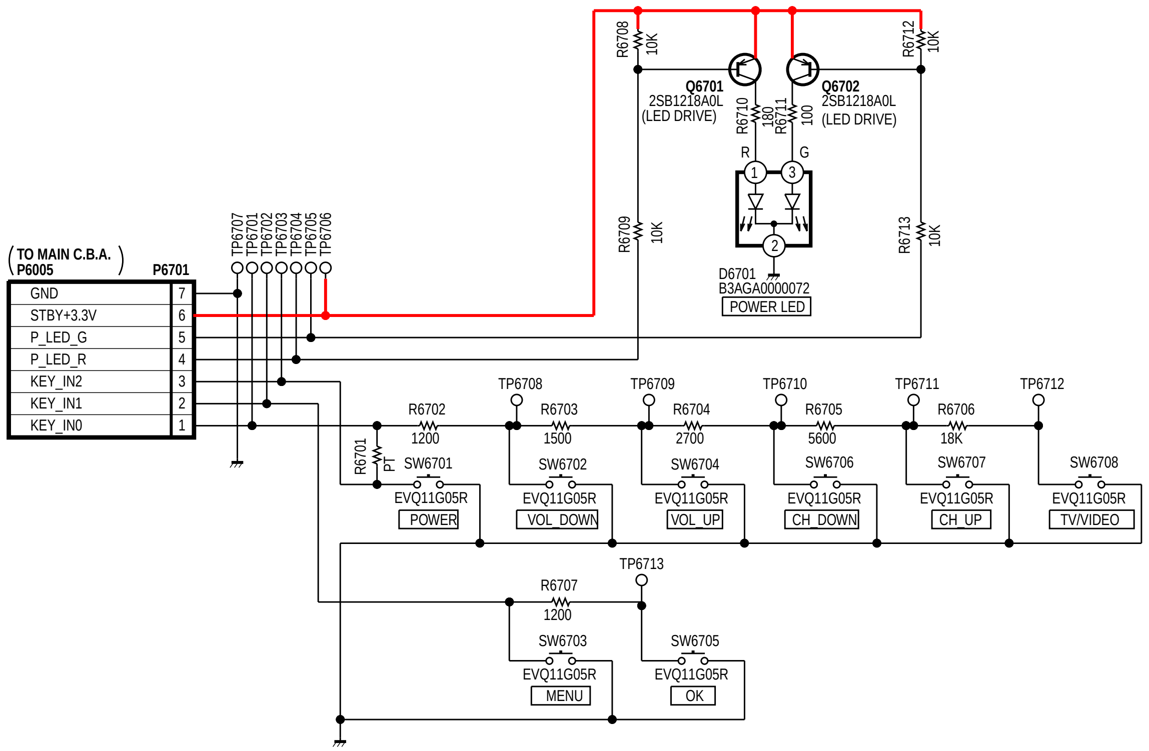
12.11. OPERATION / COVER SWITCH / THERMISTOR 1 / THERMISTOR 2 SCHEMATIC DIAGRAMS

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

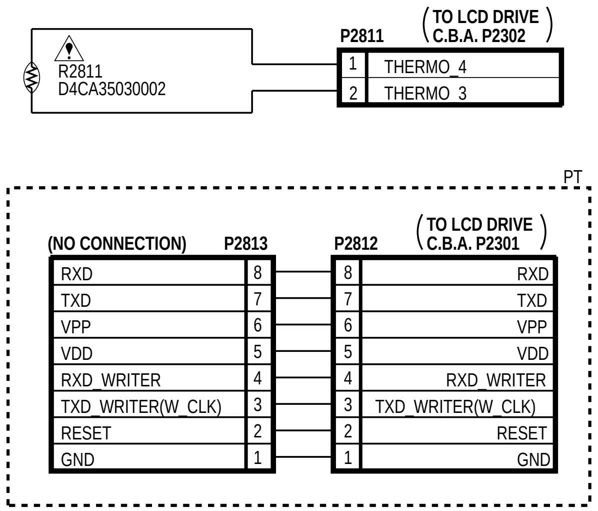
NOTE:
PARTS MARKED "PT" ARE NOT USED.

OPERATION SCHEMATIC DIAGRAM


TO MAIN C.B.A. P6005
P6701
GND 7
STBY+3.3V 6
P_LED_G 5
P_LED_R 4
KEY_IN2 3
KEY_IN1 2
KEY_IN0 1
TP6707
TP6701
TP6702
TP6703
TP6704
TP6705
TP6706
R6708 10K
R6709 10K
R6712 10K
R6713 10K
Q6701 2SB1218A0L (LED DRIVE)
Q6702 2SB1218A0L (LED DRIVE)
R6710 180
R6711 100
R
G
1
3
2
D6701 B3AGA0000072
POWER LED
TP6708
TP6709
TP6710
TP6711
TP6712
R6702 1200
R6703 1500
R6704 2700
R6705 5600
R6706 18K
R6701 PT
SW6701 EVQ11G05R POWER
SW6702 EVQ11G05R VOL_DOWN
SW6704 EVQ11G05R VOL_UP
SW6706 EVQ11G05R CH_DOWN
SW6707 EVQ11G05R CH_UP
SW6708 EVQ11G05R TV/VIDEO
TP6713
R6707 1200
SW6703 EVQ11G05R MENU
SW6705 EVQ11G05R OK

LSJB3156

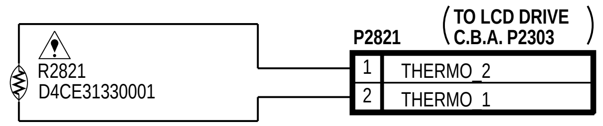
THERMISTOR 1 SCHEMATIC DIAGRAM


R2811
D4CA35030002
P2811
TO LCD DRIVE C.B.A. P2302
1 THERMO_4
2 THERMO_3
PT
(NO CONNECTION)
P2813
RXD 8
TXD 7
VPP 6
VDD 5
RXD_WRITER 4
TXD_WRITER(W_CLK) 3
RESET 2
GND 1
P2812
TO LCD DRIVE C.B.A. P2301
8 RXD
7 TXD
6 VPP
5 VDD
4 RXD_WRITER
3 TXD_WRITER(W_CLK)
2 RESET
1 GND

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

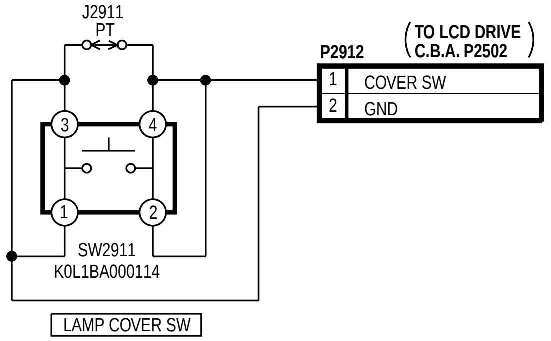
LSJB3166

THERMISTOR 2 SCHEMATIC DIAGRAM


R2821
D4CE31330001
P2821
TO LCD DRIVE C.B.A. P2303
1 THERMO_2
2 THERMO_1

LSJB3137

COVER SWITCH SCHEMATIC DIAGRAM


J2911
PT
3
4
1
2
SW2911
K0L1BA000114
LAMP COVER SW
P2912
TO LCD DRIVE C.B.A. P2502
1 COVER SW
2 GND

LSJB3160

LINK TO VOLTAGE CHART

OPERATION SCHEMATIC DIAGRAM
COVER SWITCH SCHEMATIC DIAGRAM
THERMISTOR 1 SCHEMATIC DIAGRAM
THERMISTOR 2 SCHEMATIC DIAGRAM

PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

12.12. VOLTAGE CHART

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

MAIN C.B.A.

PIN NO.	VOLTAGE
IC4101	
1	0
2	0
3	0
4	0
5	0
6	0
7	-5.2
8	0
9	4.9
10	0
11	0
12	0
13	0
14	0
15	0
16	5.0
IC5001	
1	2.5
2	---
3	0
4	1.2
5	3.2
6	0
7	3.2
IC5002	
1	3.2
2	0
3	1.4
4	2.5
5	3.2
IC5003	
1	3.2
2	0
3	1.4
4	2.5
5	3.2
IC5004	
1	3.2
2	1.5
3	0.9
4	1.2
5	0.5
6	0
7	0.1
8	0.8
9	1.2
10	2.5
11	0
12	3.2
13	0.8
14	0.8
15	0.8
16	1.0
17	0.8

PIN NO.	VOLTAGE
18	0.8
19	1.2
20	1.1
21	2.5
22	0
23	3.2
24	0
25	2.9
26	2.8
27	0
28	3.2
29	3.2
30	2.5
31	0
32	3.2
33	3.2
34	0
35	0
36	3.2
37	0
38	2.5
39	0
40	2.5
41	2.0
42	1.2
43	0.5
44	0
45	2.5
46	0
47	2.5
48	2.0
49	1.2
50	0.5
51	0
52	2.5
53	0
54	2.5
55	2.0
56	1.1
57	0.5
58	2.5
59	0
60	1.8
61	1.8
62	1.7
63	1.0
64	1.0
65	0
66	2.5
67	1.2
68	1.0
69	1.0
70	0
71	2.5
72	1.2

PIN NO.	VOLTAGE
73	3.2
74	---
75	2.5
76	1.6
77	0
78	0
79	2.5
80	1.4
81	0
82	0
83	1.4
84	2.5
85	0
86	0
87	1.6
88	2.5
89	---
90	3.2
91	0
92	0
93	0
94	3.2
95	0
96	0
97	0
98	0
99	0
100	0
101	0
102	0
103	0
104	1.5
105	3.2
106	0
107	---
108	---
109	0
110	0
111	1.6
112	0
113	3.2
114	2.5
115	1.1
116	2.0
117	1.0
118	1.5
119	1.4
120	1.1
121	2.0
122	1.0
123	2.5
124	0
125	1.5
126	1.4
127	1.1

PIN NO.	VOLTAGE
128	2.5
129	0.8
130	0.9
131	1.1
132	0.1
133	0
134	3.2
135	2.5
136	1.1
137	2.2
138	0.9
139	1.3
140	1.3
141	1.1
142	1.4
143	0.7
144	0
IC5101	
1	3.2
2	0
3	1.4
4	2.5
5	3.2
IC5102	
1	3.5
2	0
3	1.4
4	2.6
5	3.5
IC5103	
1	---
2	---
3	---
4	---
5	---
6	3.2
7	0
8	2.5
9	0
10	0
11	0
12	3.2
13	0
14	1.6
15	2.5
16	1.6
17	3.2
18	0
19	---
20	0
21	3.2
22	0
23	3.2
24	3.3
25	3.2

PIN NO.	VOLTAGE
26	0
27	2.0
28	2.5
29	0.5
30	1.2
31	0
32	2.0
33	2.5
34	0.5
35	1.2
36	0
37	2.0
38	2.5
39	0.5
40	0.6
41	2.5
42	0
43	1.8
44	1.8
45	1.2
46	1.0
47	1.0
48	0
49	2.5
50	1.1
51	3.2
52	---
53	2.5
54	1.6
55	0
56	0
57	2.5
58	1.4
59	0
60	0
61	3.2
62	3.3
63	3.1
64	2.8
65	2.9
66	2.5
67	0
68	1.6
69	3.2
70	1.6
71	3.2
72	0.1
73	0
74	0
75	0
76	0
77	0
78	3.2
79	0
80	0

PIN NO.	VOLTAGE
81	3.2
82	2.5
83	0
84	0
85	0
86	0
87	0
88	0
89	0
90	0
91	0
92	0
93	0
94	1.6
95	2.5
96	0
97	3.2
98	---
99	---
100	---
IC5105	
1	3.2
2	3.2
3	1.6
4	0
5	0
6	0
7	0
8	0
9	---
10	0
11	0
12	0
13	0
14	0
15	0
16	3.2
IC5304	
1	3.3
2	1.4
3	3.3
4	1.5
5	0.4
6	0
7	1.2
8	0.6
9	3.3
10	0.4
11	0.4
12	0
13	0.5
14	---
15	3.3
16	0
17	3.3

PIN NO.	VOLTAGE
18	3.2
19	3.2
20	0
21	---
22	2.8
23	1.7
24	3.0
25	0.2
26	0.2
27	0.2
28	0
29	3.3
30	0
31	1.6
32	0
33	1.5
34	0.4
35	3.3
36	1.2
37	0.6
38	0
39	0.5
40	0.4
41	3.3
42	0.5
43	3.3
44	0
45	1.3
46	0
47	1.2
48	0.6
49	3.3
50	1.1
51	0.5
52	0
53	0.3
54	0.5
55	3.3
56	0.4
57	0.2
58	0
59	0
60	1.6
61	1.7
62	1.6
63	1.6
64	1.6
65	1.3
66	1.4
67	1.1
68	1.6
69	---
70	---
71	0
72	0

PIN NO.	VOLTAGE
73	---
74	1.4
75	3.3
76	1.4
77	0.6
78	0
79	1.1
80	0.5
81	3.3
82	0.4
83	0.4
84	0
85	0.4
86	0
IC5305	
1	2.5
2	0
3	1.9
IC5306	
1	3.3
2	1.4
3	3.3
4	1.5
5	0.4
6	0
7	1.2
8	0.6
9	3.3
10	0.4
11	0.4
12	0
13	0.5
14	---
15	3.3
16	0
17	3.3
18	3.2
19	3.2
20	0
21	---
22	2.8
23	1.7
24	3.0
25	0.2
26	0.2
27	0.2
28	0
29	3.3
30	0
31	1.6
32	0
33	1.5
34	0.4
35	3.3
36	1.2

PIN NO.	VOLTAGE
37	0.6
38	0
39	0.5
40	0.4
41	3.3
42	0.5
43	3.3
44	0
45	1.3
46	0
47	1.2
48	0.6
49	3.3
50	1.1
51	0.5
52	0
53	0.3
54	0.5
55	3.3
56	0.4
57	0.2
58	0
59	0
60	1.6
61	1.7
62	1.6
63	1.6
64	1.6
65	1.3
66	1.4
67	1.1
68	1.6
69	---
70	---
71	0
72	0
73	---
74	1.4
75	3.3
76	1.4
77	0.6
78	0
79	1.1
80	0.5
81	3.3
82	0.4
83	0.4
84	0
85	0.4
86	0
IC5502	
1	0
2	3.5
3	0
4	0

PIN NO.	VOLTAGE
5	3.5
6	0
7	3.5
8	3.5
IC5505	
1	3.5
2	3.5
3	0
4	0
5	3.5
IC5701	
1	0
2	---
3	---
4	0.6
5	1.3
6	0.8
7	0.3
8	0.3
9	0.3
10	3.5
11	0
12	0.6
13	0.9
14	0
15	3.5
16	3.5
17	0
18	0
19	3.3
20	-0.3
21	0
22	3.5
23	0
24	0
25	0.6
26	0.4
27	0.3
28	0.3
29	0.3
30	0.8
31	0
32	0.6
33	0.9
34	0
35	0
36	0.5
37	0.4
38	0.3
39	0.3
40	0.3
41	0
42	0.9
43	0.5
44	0.9

PIN NO.	VOLTAGE
45	---
46	3.5
47	---
48	0.6
49	0.4
50	0.4
51	0
52	0.4
53	0.4
54	0.9
55	0.7
56	0.9
57	0
58	0
59	0
60	3.5
61	0
62	0
63	0
64	0
65	0
66	0
67	0
68	0
69	0
70	0
71	0
72	0
73	0
74	0
75	0
76	3.5
77	0
78	0
79	0
80	3.3
81	0
82	2.7
83	3.3
84	3.3
85	3.5
86	3.5
87	3.5
88	3.3
89	1.7
90	0
91	0
92	-3.0
93	3.5
94	0
95	---
96	3.5
97	---
98	0
99	1.3

PIN NO.	VOLTAGE
100	0
101	0.4
102	0.4
103	0.4
104	0.8
105	0.7
106	0.9
107	0.9
108	---
109	---
110	0.5
111	0
112	3.5
113	1.3
114	0.3
115	0.3
116	0.3
117	0.9
118	0.5
119	0.9
120	3.5
IC5705	
1	3.3
2	0.4
3	0.7
4	0.8
5	0
6	1.6
7	0.7
8	1.0
9	1.0
10	3.3
11	0.7
12	0.6
13	0.5
14	0
15	0.4
16	0.7
17	1.2
18	0
19	0.5
20	1.0
21	0.9
22	0
23	0.6
24	0.7
25	0.9
26	3.3
27	1.7
28	0.8
29	0
30	3.3
31	1.6
32	3.2
33	0

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

PIN NO.	VOLTAGE
34	3.3
35	0
36	0
37	1.2
38	1.3
39	1.3
40	1.2
41	1.2
42	1.3
43	0
44	3.3
45	1.2
46	1.4
47	1.2
48	1.3
49	0
50	1.5
51	3.2
52	3.0
53	0
54	1.0
55	0.8
56	0.2
IC5706	
1	5.2
2	0
3	1.3
4	0
5	5.2
IC5801	
1	0
2	0
3	0
4	0
5	2.5
6	2.5
7	0.1
8	1.6
IC5803	
1	5.0
2	0
3	1.4
4	3.3
5	5.0
IC5805	
1	0
2	0
3	0.1
4	0
5	3.5
6	3.5
7	3.5
8	0
9	0
10	0

PIN NO.	VOLTAGE
11	0
12	0
13	3.5
14	0
15	0
16	3.5
17	0
18	0
19	3.5
20	0
21	0
22	1.9
23	1.9
24	0
25	0
26	3.5
27	2.5
28	2.4
29	3.3
30	3.3
31	3.3
32	3.4
33	0
34	0
35	1.9
36	0
37	3.4
38	3.5
39	1.4
40	1.4
41	0
42	3.5
43	1.4
44	1.4
45	0
46	3.5
47	1.4
48	1.4
49	0
50	3.5
51	1.4
52	1.4
53	0
54	0
55	3.4
56	1.6
57	3.5
58	---
59	---
60	0
61	3.5
62	---
63	---
64	0
65	3.5

PIN NO.	VOLTAGE
66	---
67	---
68	0
69	3.5
70	---
71	---
72	0
73	0
74	1.9
75	0
76	0
77	0
78	---
79	1.9
80	0
81	---
82	---
83	---
84	2.1
85	0
86	0
87	0
88	0
89	3.5
90	0
91	0
92	1.9
93	---
94	1.9
95	0
96	3.5
97	3.1
98	3.5
99	3.5
100	---
101	0
102	3.1
103	0
104	3.5
105	1.9
106	0
107	---
108	0
109	3.5
110	0
111	0
112	0
113	0
114	1.9
115	0
116	0
117	0
118	0
119	0
120	0

PIN NO.	VOLTAGE
121	0
122	0
123	0
124	0
125	0
126	3.5
127	0
128	0
129	0
130	0
131	0
132	0
133	---
134	3.5
135	0
136	---
137	---
138	0
139	0
140	---
141	---
142	---
143	---
144	---
IC5807	
1	0
2	0
3	0
4	0
5	0
6	3.1
7	0
8	4.9
9	4.9
10	0.4
11	0.4
12	0
13	0
14	4.9
15	4.8
16	0
IC5808	
1	4.5
2	4.5
3	4.5
4	0
5	4.5
6	4.5
7	4.5
8	9.1
IC5809	
1	1.8
2	---
3	0
4	0.6

PIN NO.	VOLTAGE
5	3.5
6	0
7	3.5
IC6002	
1	4.9
2	0
3	1.4
4	3.3
5	4.9
IC6003	
1	3.3
2	0
3	1.0
4	2.0
5	1.4
6	1.6
7	0
8	1.7
9	1.7
10	---
11	3.3
12	1.5
13	1.9
14	0
15	3.2
16	3.3
17	3.3
18	3.3
19	0
20	1.8
21	3.3
22	3.5
23	3.5
24	3.5
25	0
26	3.3
27	3.3
28	3.3
29	0
30	0
31	0
32	0
33	0
34	0
35	0
36	0
37	0
38	0
39	0
40	3.3
41	0
42	0
43	0
44	0
45	0

PIN NO.	VOLTAGE
46	0
47	3.3
48	1.8
49	---
50	0
51	3.5
52	0
53	3.2
54	3.2
55	0
56	0
57	0
58	3.3
59	3.3
60	0
61	0
62	3.3
63	0
64	0
65	3.3
66	1.7
67	0
68	1.8
69	0
70	2.5
71	1.3
72	1.3
73	0
74	1.6
75	2.6
76	1.5
77	3.3
78	0.9
79	2.6
80	2.3
81	1.0
82	3.3
83	0
84	2.5
85	2.5
86	3.3
87	0.2
88	3.5
89	3.3
90	2.8
91	0
92	0
93	1.8
94	1.0
95	0
96	3.3
97	3.3
98	0
99	1.7
100	1.7

PIN NO.	VOLTAGE
101	3.3
102	3.5
103	3.3
104	3.3
105	3.3
106	3.3
107	3.3
108	3.3
109	0
110	3.3
111	3.3
112	0.6
113	3.3
114	3.3
115	3.3
116	5.2
117	5.2
118	0
119	0
120	0
121	3.3
122	3.3
123	0
124	3.3
125	3.3
126	0
127	0
128	1.6
129	1.6
130	1.6
131	0
132	1.6
133	1.6
134	1.6
135	1.6
136	1.6
137	1.6
138	1.6
139	0
140	3.3
141	1.6
142	1.6
143	1.6
144	1.6
145	---
146	0
147	0
148	0
149	0
150	1.6
151	1.4
152	1.6
153	3.3
154	0
155	1.6

PIN NO.	VOLTAGE
156	1.7
157	1.7
158	1.7
159	3.3
160	3.3
IC6004	
1	3.3
2	3.3
3	0
IC6006	
1	---
2	---
3	5.2
4	0
5	5.2
6	5.2
7	0
8	5.2
IC6007	
1	0
2	5.2
3	0
4	0
5	5.2
6	5.2
7	0
8	5.2
IC6009	
1	2.2
2	0
3	1.0
4	2.0
5	2.3
6	1.5
7	2.7
8	1.1
9	---
10	---
11	3.6
12	2.2
13	---
14	---
15	---
16	---
17	1.2
18	1.9
19	1.3
20	1.5
21	1.4
22	1.8
23	1.5
24	1.8
25	0
26	3.6
27	0

PIN NO.	VOLTAGE
28	3.6
29	0.5
30	---
31	0.5
32	---
33	0.3
34	---
35	0.3
36	---
37	3.2
38	0.5
39	---
40	0.8
41	---
42	0.7
43	---
44	0.6
45	0
46	0
47	3.2
48	1.8
IC6010	
1	0
2	0
3	0
4	5.3
5	1.4
6	4.1
7	0
8	0
9	0
10	0
11	0
12	1.8
13	1.4
14	4.1
Q5001	
E	3.8
C	9.1
B	4.4
Q5002	
E	3.8
C	9.1
B	4.4
Q5003	
E	3.9
C	9.1
B	4.5
Q5004	
E	3.9
C	9.1
B	4.5
Q5005	
E	3.1

PIN NO.	VOLTAGE
C	0
B	2.4
Q5006	
E	4.1
C	0
B	3.4
Q5007	
E	4.1
C	0
B	3.4
Q5008	
E	1.2
C	9.1
B	1.7
Q5009	
E	1.3
C	9.1
B	1.9
Q5010	
E	1.3
C	9.1
B	1.9
Q5101	
E	3.8
C	9.1
B	4.4
Q5102	
E	0
C	0
B	3.5
Q5103	
E	3.8
C	9.1
B	4.4
Q5104	
E	0
C	0
B	0.7
Q5105	
E	2.1
C	9.1
B	2.7
Q5106	
E	3.9
C	9.1
B	4.5
Q5107	
E	3.9
C	9.1
B	4.5
Q5108	
E	2.6
C	0
B	1.9

PIN NO.	VOLTAGE
Q5109	
E	4.1
C	0
B	3.4
Q5110	
E	4.1
C	0
B	3.5
Q5111	
E	0.7
C	9.1
B	1.3
Q5112	
E	1.3
C	9.1
B	1.9
Q5113	
E	1.3
C	9.1
B	1.9
Q5301	
E	1.4
C	0
B	0.7
Q5302	
E	0.7
C	0
B	0
Q5509	
E	2.6
C	5.2
B	3.3
Q5518	
E	2.6
C	5.2
B	1.9
Q5519	
E	5.2
C	0
B	5.2
Q5520	
E	0
C	3.5
B	0
Q5801	
E	0
C	0
B	0.7
Q5802	
E	0
C	3.0
B	0
Q5803	
E	0
C	3.0

PIN NO.	VOLTAGE
B	0
Q5812	
S	2.5
D	2.5
G	3.3
Q5814	
S	2.5
D	2.5
G	3.3
Q5816	
S	0
D	3.5
G	0
Q5817	
E	0
C	0
B	0
Q5818	
E	5.0
C	4.6
B	4.2
Q5819	
E	0
C	0
B	0.7
Q5821	
E	0
C	0
B	0
Q5822	
E	0
C	0
B	0.8
Q5823	
E	0
C	0
B	0.8
Q6001	
E	5.2
C	---
B	4.9
Q6002	
E	5.2
C	5.2
B	4.6
Q6003	
E	0
C	---
B	---
Q6004	
E	0
C	0
B	3.3
Q6007	
E	2.6

VOLTAGE CHART
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

BASE C.B.A.

PIN NO.	VOLTAGE
C	5.2
B	2.4
Q6008	
E	2.0
C	5.0
B	2.4
Q6009	
E	2.0
C	5.2
B	2.6
Q6010	
E	1.3
C	5.2
B	2.0
Q6011	
E	0
C	---
B	0
Q6012	
E	0
C	0.2
B	0.7
Q6013	
E	0
C	0
B	0.7
TP3401	4.5
TP3402	4.1
TP3403	4.5
TP3404	4.5
TP3405	4.5
TP3406	4.5
TP4101	4.7
TP4102	4.7
TP5301	0.5
TP5302	0.5
TP5303	0.5
TP5701	0
TP5702	0
TP5703	0
TP5710	3.5
TP5711	3.5
TP5712	0
TP5713	0
TP5714	3.5
TP5715	0
TP5801	3.1
TP5802	3.1
TP5803	3.0
TP5804	3.1
TP5805	3.1
TP5806	3.0
TP5808	0
TP5809	0

PIN NO.	VOLTAGE
TP5810	0
TP5811	2.9
TP5812	2.9
TP6001	3.3
TP6002	2.3
TP6003	2.4
TP6004	2.5
TP6005	2.5
TP6006	0
TP6007	0
TP6008	0
TP6009	0
TP6010	0
TP6011	0
TP6012	3.5
TP6013	3.5
TP6014	0

PIN NO.	VOLTAGE
IC1101	
1	10.8
2	0
3	1.3
4	5.1
5	10.8
IC1103	
1	5.3
2	5.3
3	9.2
4	9.2
5	9.2
6	9.2
7	8.4
8	11.0
9	0
10	2.5
11	5.0
12	2.3
13	2.5
14	4.5
15	5.3
16	5.3
17	0
18	0
19	9.2
20	6.5
21	2.3
22	5.3
23	5.3
24	5.3
25	5.3
26	0
IC1105	
1	3.5
2	3.5
3	9.2
4	9.2
5	9.2
6	9.2
7	8.4
8	11.0
9	0
10	2.5
11	5.0
12	2.3
13	2.5
14	4.5
15	3.5
16	3.6
17	0
18	0
19	9.2
20	6.7
21	0

PIN NO.	VOLTAGE
22	3.5
23	3.5
24	3.5
25	3.5
26	0
IC1106	
1	2.6
2	2.6
3	9.2
4	9.2
5	9.2
6	9.2
7	8.4
8	11.0
9	0
10	2.5
11	5.0
12	1.5
13	2.5
14	4.5
15	2.6
16	2.7
17	0
18	0
19	9.2
20	6.7
21	0
22	2.6
23	2.6
24	2.6
25	2.6
26	0
IC3001	
1	5.4
2	8.6
3	5.4
4	1.9
5	5.4
6	8.6
7	5.4
8	8.8
9	5.4
10	1.6
11	5.4
12	8.6
13	5.4
14	0
15	5.4
16	5.4
17	3.7
18	0
19	---
20	0
21	5.4
22	0

PIN NO.	VOLTAGE
23	5.4
24	0
25	5.4
26	0
27	5.4
28	0
29	5.4
30	0
31	5.4
32	0
33	5.4
34	0
35	5.4
36	0
37	5.4
38	0
39	5.4
40	0
41	5.4
42	0
43	5.4
44	0
45	5.0
46	5.0
47	8.8
48	---
49	---
50	---
51	3.8
52	---
53	8.8
54	3.8
55	3.8
56	3.8
57	8.8
58	3.8
59	3.8
60	3.8
61	---
62	0
63	---
64	---
65	---
66	---
67	---
68	0
69	---
70	0
71	---
72	---
73	---
74	0
75	---
76	0
77	5.4

PIN NO.	VOLTAGE
78	---
79	5.4
80	2.3
IC4001	
1	4.8
2	4.8
3	4.5
4	0
5	4.6
6	4.8
7	4.8
8	9.1
IC4002	
1	4.7
2	4.7
3	4.7
4	4.8
5	4.7
6	0
7	0
8	0
9	0.3
10	0.3
11	4.8
12	4.7
13	4.7
14	4.7
15	4.7
16	9.1
IC4003	
1	4.7
2	4.7
3	4.7
4	4.8
5	4.7
6	0
7	0
8	0
9	0.3
10	0.3
11	4.8
12	4.7
13	4.7
14	4.7
15	4.7
16	9.1
IC4004	
1	4.7
2	4.7
3	4.7
4	4.8
5	4.7
6	0
7	0
8	0

PIN NO.	VOLTAGE
9	0.3
10	0.3
11	4.8
12	4.7
13	4.7
14	4.7
15	4.7
16	9.1
IC4005	
1	4.8
2	4.8
3	4.6
4	0
5	4.5
6	4.8
7	4.8
8	9.1
IC4201	
1	4.6
2	4.6
3	4.6
4	4.6
5	4.6
6	4.6
7	4.6
8	4.6
9	0.9
10	4.6
11	1.5
12	0.9
13	5.0
14	5.0
15	0
16	9.1
17	---
18	---
19	3.8
20	3.8
21	0
22	4.6
23	4.6
24	4.6
25	4.6
26	4.6
27	4.6
28	4.6
29	4.6
30	4.6
IC4501	
1	-9.6
2	---
3	-4.0
4	-4.0
5	15.9
6	12.1

PIN NO.	VOLTAGE
7	0
8	-16.2
9	-3.4
10	-16.2
11	0
12	12.1
13	15.9
14	-4.0
15	---
16	-10.0
17	-9.7
IC4502	
1	-9.6
2	0
3	0
4	-16.2
5	0
6	0
7	-9.7
8	11.3
Q1101	
E	0
C	4.1
B	0
Q1102	
E	4.1
C	0
B	4.1
Q1103	
E	5.1
C	5.0
B	4.4
Q1104	
E	0
C	0
B	0.7
Q1105	
E	5.1
C	-1.6
B	5.1
Q1106	
E	0
C	5.1
B	0
Q1107	
E	0
C	0
B	0.7
Q1108	
E	0
C	0
B	0.7
Q1109	
E	5.2

PIN NO.	VOLTAGE
C	0.3
B	5.5
Q1110	
E	3.0
C	-2.1
B	3.5
Q1111	
E	0
C	0
B	0.7
Q1112	
1	5.3
2	5.3
3	5.3
4	0
5	5.3
6	5.3
7	5.3
8	5.3
Q1113	
E	0
C	0
B	0.8
Q1114	
E	0
C	0
B	0.7
Q3001	
E	4.4
C	0
B	3.8
Q3002	
E	4.4
C	0
B	3.8
Q3003	
E	4.4
C	0
B	3.8
Q3004	
E	4.4
C	0
B	3.8
Q3005	
E	4.4
C	0
B	3.8
Q3006	
E	4.4
C	0
B	3.8
Q3007	
E	0
C	-3.3
B	0

PIN NO.	VOLTAGE
Q3008	
E	0
C	0
B	-3.3
Q3009	
E	0
C	0
B	-3.3
Q3201	
E	4.4
C	0
B	3.8
Q3202	
E	2.6
C	0
B	1.9
Q3203	
E	2.6
C	0
B	1.9
Q3204	
E	2.6
C	0
B	1.9
Q3205	
E	3.7
C	6.8
B	4.4
Q3206	
E	1.9
C	3.7
B	2.6
Q3207	
E	3.7
C	6.8
B	4.4
Q3208	
E	3.7
C	6.8
B	4.4
Q3209	
E	1.8
C	3.6
B	2.6
Q3210	
E	6.1
C	8.4
B	6.8
Q3211	
E	6.1
C	8.4
B	6.8
Q3212	
E	6.1
C	8.4

PIN NO.	VOLTAGE
B	6.8
Q4001	
E	4.8
C	0
B	4.2
Q4002	
E	8.4
C	9.2
B	9.1
Q4502	
E	0.7
C	-4.1
B	0
TP1101	0
TP1102	3.0
TP1103	5.1
TP1104	2.8
TP1105	9.2
TP1106	9.2
TP1107	5.3
TP1108	5.3
TP1109	3.5
TP1110	2.6
TP1111	31.1
TP1112	18.6
TP1113	5.3
TP1114	3.5
TP1115	2.6
TP1116	9.2
TP1117	5.3
TP1118	5.3
TP1119	3.5
TP1120	2.6
TP1121	5.3
TP1122	3.5
TP1123	2.6
TP3001	4.5
TP3002	4.5
TP3003	4.5
TP3004	4.5
TP3005	4.5
TP3006	4.5

VOLTAGE CHART
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

LCD DRIVE C.B.A.

PIN NO.	VOLTAGE
IC2001	
1	---
2	---
3	1.3
4	0.6
5	1.1
6	1.6
7	1.6
8	0.7
9	1.3
10	1.2
11	0.4
12	1.2
13	3.4
14	3.4
15	3.4
16	3.4
17	3.4
18	0
19	3.4
20	0
21	0
22	5.3
23	5.3
24	6.5
25	5.7
26	15.6
27	4.6
28	0
29	7.1
30	15.6
31	7.1
32	0
33	7.1
34	15.6
35	7.1
36	0
37	7.1
38	15.6
39	7.1
40	0
41	7.1
42	15.6
43	7.1
44	0
45	7.1
46	15.6
47	7.1
48	0
49	7.1
50	15.6
51	7.1
52	0
53	7.1
54	9.7
55	9.7
56	15.6
57	0
58	0
59	3.4
60	1.8
61	0.5
62	1.7
63	0
64	3.4
IC2002	
1	---
2	---
3	1.3
4	0.6
5	1.1
6	1.6
7	1.6
8	0.7
9	1.3
10	1.2
11	0.4
12	1.2
13	3.4
14	3.4
15	3.4
16	3.4
17	3.4
18	0
19	3.4
20	0
21	0
22	5.3
23	5.3
24	6.5
25	5.7
26	15.6
27	4.6
28	0
29	7.1
30	15.6
31	7.1
32	0
33	7.1
34	15.6
35	7.1
36	0
37	7.1
38	15.6
39	7.1
40	0
41	7.1
42	15.6
43	7.1
44	0
45	7.1
46	15.6
47	7.1
48	0
49	7.1
50	15.6
51	7.1
52	0
53	7.1
54	9.7
55	9.7
56	15.6
57	0
58	0
59	3.4
60	1.8
61	0.5
62	1.7
63	0
64	3.4
IC2003	
1	---
2	---
3	1.3
4	0.6
5	1.1
6	1.6
7	1.6
8	0.7
9	1.3
10	1.2
11	0.4
12	1.2
13	3.4
14	3.4
15	3.4
16	3.4
17	3.4
18	0
19	3.4
20	0
21	0
22	5.3
23	5.3
24	6.5
25	5.7
26	15.6
27	4.6
28	0
29	7.1
30	15.6
31	7.1
32	0
33	7.1
34	15.6
35	7.1
36	0
37	7.1
38	15.6
39	7.1
40	0
41	7.1
42	15.6
43	7.1
44	0
45	7.1
46	15.6
47	7.1
48	0
49	7.1
50	15.6
51	7.1
52	0
53	7.1
54	9.7
55	9.7
56	15.6
57	0
58	0
59	3.4
60	1.8
61	0.5
62	1.7
63	0
64	3.4
IC2004	
1	15.6
2	3.5
3	---
4	---
5	3.4
6	0
7	0
8	3.4
9	1.8
10	3.3
11	1.7
12	---
13	---
14	0
15	0
16	0
17	---
18	7.2
19	8.1
20	0.5
21	---
22	7.8
23	7.8
24	0
25	---
26	0
27	0
28	15.5
29	---
30	15.6
IC2301	
1	3.4
2	3.4
3	3.4
4	0
5	3.4
6	3.4
7	3.4
8	3.4
IC2302	
1	3.4
2	3.4
3	0
IC2303	
1	0
2	2.3
3	0
4	3.2
5	3.4
6	3.4
7	3.4
8	1.6
9	1.7
10	0
11	0
12	---
13	0
14	3.4
15	3.4
16	3.4
17	0
18	3.4
19	3.4
20	3.4
21	0
22	0
23	1.7
24	0
25	1.8
26	0
27	0
28	3.4
29	0.2
30	0
31	0
32	0
33	3.4
34	3.4
35	0
36	0
37	0
38	3.4
39	3.4
40	0
41	3.2
42	3.4
43	0
44	0
45	3.4
46	3.4
47	3.4
48	0
49	0
50	0
51	0
52	1.6
53	3.4
54	0
55	0
56	3.4
57	3.4
58	3.4
59	2.5
60	3.0
61	0
62	3.4
63	1.5
64	2.0
IC2501	
1	1.9
2	---
3	0
4	0.6
5	3.4
6	0
7	3.5
IC2502	
1	5.3
2	0
3	1.7
4	0
5	5.3
IC2503	
1	0.6
2	0.9
3	1.6
4	0
5	0.7
6	3.3
7	1.6
8	0
9	1.3
10	1.2
11	1.3
12	1.2
13	3.3
14	0
15	1.3
16	1.2
17	1.2
18	1.3
19	1.3
20	1.2
21	0
22	0
23	3.3
24	0
25	3.3
26	1.7
27	3.3
28	0
29	3.1
30	1.0
31	3.3
32	0.8
33	0.6
34	0.4
35	0.5
36	0
37	0.6
38	0.5
39	0.6
40	3.3
41	0.9
42	0.8
43	0.7
44	0
45	0.5
46	0.7
47	0.7
48	0.6
49	3.3
50	0.7
51	1.0
52	0
53	0.9
54	1.0
55	0.3
56	3.3
IC2901	
1	3.4
2	16.6
3	0
4	15.6
5	1.1
IC2902	
1	3.4
2	9.2
3	0
4	7.0
5	1.4
IC2903	
1	3.4
2	9.2
3	0
4	8.1
5	1.4
IC2904	
1	3.4
2	9.2
3	0
4	7.1
5	1.4
IC2905	
1	1.5
2	0.2
3	0
4	0
5	1.7
6	1.7
7	1.7
8	7.1
Q2001	
E	15.6
C	1.5
B	15.7
Q2002	
E	0
C	1.1
B	0.3
Q2003	
E	15.6
C	1.6
B	15.7
Q2004	
E	0
C	1.2
B	0.2
Q2005	
E	15.6
C	1.3
B	15.7
Q2006	
E	0
C	1.2
B	0.2
Q2007	
E	15.6
C	1.6
B	15.7
Q2008	
E	0
C	1.2
B	0
Q2009	
E	15.6
C	1.8
B	15.7
Q2010	
E	0
C	1.5
B	0.2
Q2301	
E	3.4
C	3.4
B	2.8
TP2001	7.1
TP2002	7.1
TP2003	7.1
TP2004	5.6
TP2005	5.7
TP2006	5.7
TP2501	0
TP2901	0
TP2902	3.4
TP2903	3.4
TP2904	3.4
TP2905	3.4
TP2906	15.6
TP2907	7.0
TP2908	8.1
TP2909	7.1
TP2910	15.6
TP2911	7.1
TP2912	8.1
TP2913	7.1
TP2914	0.2
TP2915	0
TP2916	0

VOLTAGE CHART
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

POWER C.B.A.

PIN NO.	VOLTAGE
IC1001	
1	171.3
2	---
3	0
4	19.5
5	0.1
6	1.5
7	0.5
IC1002	
1	9.2
2	8.1
3	8.5
4	19.5
IC1003	
1	2.5
2	0
3	10.7
Q801	
E	0
C	0
B	0.8
Q1001	
E	0
C	0.6
B	0.6
Q1002	
E	0
C	22.0
B	0.6
Q1003	
E	22.6
C	19.0
B	23.1
Q1004	
E	0
C	0.6
B	0.6
Q1005	
E	0
C	18.9
B	0.6
Q1006	
E	19.6
C	16.9
B	20.2
TP803	10.7
TP804	14.1
TP809	0
TP810	10.7
TP811	3.4
TP1001	30.9
TP1002	18.0
TP1003	0

PIN NO.	VOLTAGE
TP1004	19.0
TP1005	0
TP1006	16.9
TP1007	0
TP1008	171.3
TP1009	15.9
TP1010	0
TP1011	-16.2
TP1012	-5.0

BALLAST C.B.A.

PIN NO.	VOLTAGE
IC1302	
1	16.9
2	19.3
3	0
4	3.4
IC1303	
1	1.2
2	0
3	13.2
4	13.3
IC1304	
1	0.7
2	0
3	0
4	2.8
Q1301	
E	18.9
C	18.8
B	18.2
Q1302	
E	0
C	0
B	0.7
Q1304	
S	0
D	246.5
G	4.1
Q1305	
E	0
C	5.1
B	0
Q1306	
S	42.0
D	83.9
G	49.2
Q1307	
S	0
D	41.9
G	8.0
Q1308	
S	41.8
D	83.7
G	49.1
Q1309	
S	0
D	41.8
G	8.0
Q1310	
S	0
D	2.3
G	0
TP1301	331.3
TP1302	0

PIN NO.	VOLTAGE
TP1303	18.8
TP1304	0
TP1305	246.5
TP1306	16.9
TP1307	0
U1301	
1	57.3
2	49.2
3	0
4	---
5	57.2
6	49.1
7	41.7
8	---
9	8.0
10	8.0
11	2.6
12	18.7
13	0
14	5.1
15	---
16	---
17	51.3
18	---
19	16.9
20	0
21	0
22	0
23	0
24	---
25	---
26	---
27	0
28	0
29	18.7
30	4.4
31	18.7

OPERATIONC.B.A.

PIN NO.	VOLTAGE
Q6701	
E	3.3
C	0
B	3.3
Q6702	
E	3.3
C	3.2
B	2.6
TP6701	3.3
TP6702	3.3
TP6703	3.3
TP6704	3.3
TP6705	0.3
TP6706	3.3
TP6707	0
TP6708	3.3
TP6709	3.3
TP6710	3.3
TP6711	3.3
TP6712	3.3
TP6713	3.3

FRONT JACK C.B.A.

PIN NO.	VOLTAGE
Q3901	
E	0
C	4.1
B	0
Q3902	
E	0
C	4.1
B	0

VOLTAGE CHART
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

13 CIRCUIT BOARD LAYOUT

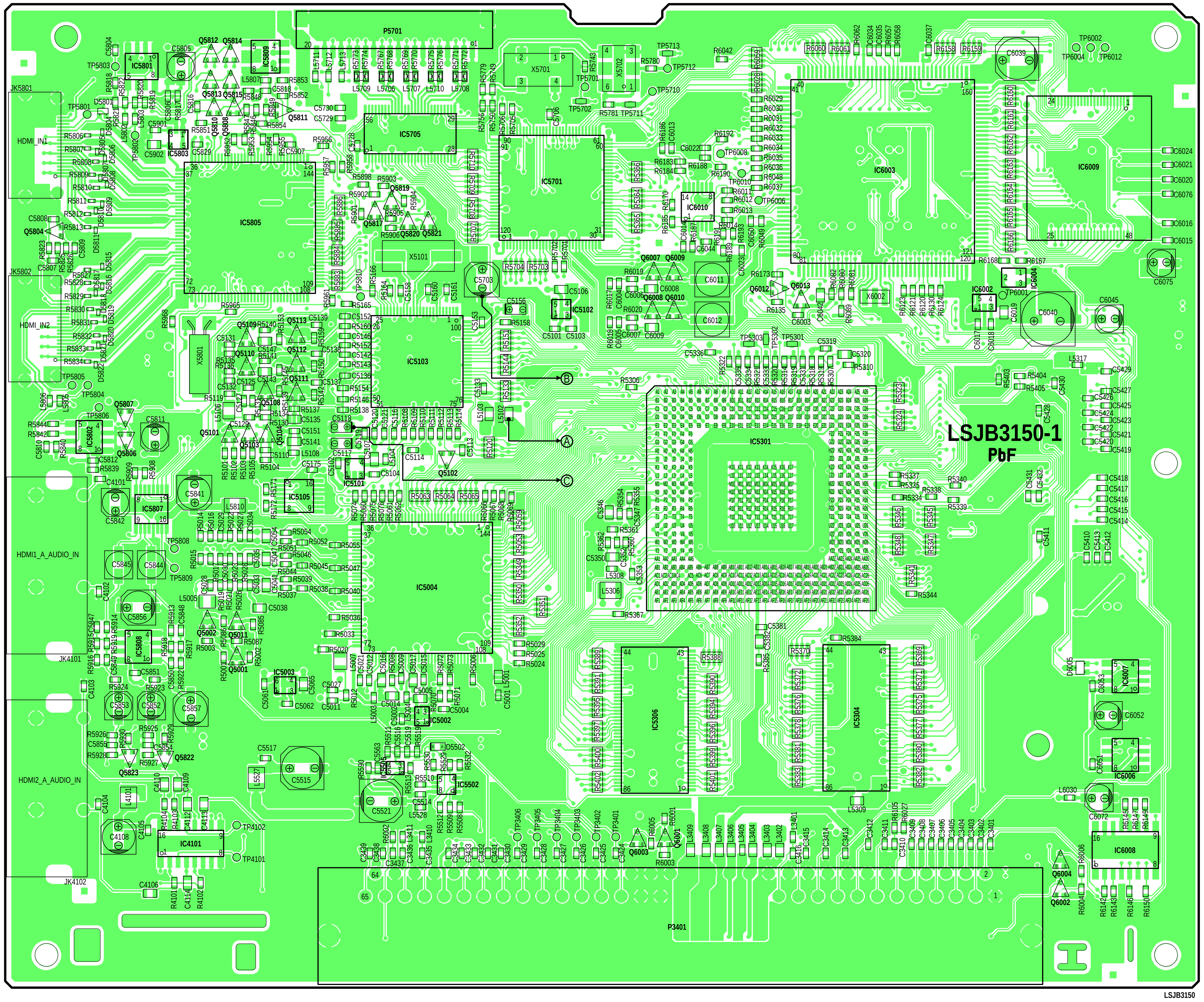
13.1. MAIN C.B.A.

MAIN C.B.A. LSEB3150A (SUFFIX (VERSION) NUMBER①)

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE: MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

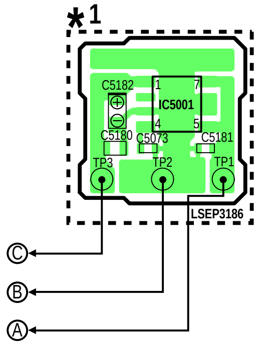
(COMPONENT SIDE)


P5701
IC5801
IC5803
IC5805
IC5705
IC5701
IC6010
IC6003
IC6009
IC6002
IC5103
IC5102
IC5101
IC5105
IC5807
IC5004
IC5301
IC5306
IC5304
IC5003
IC5002
IC5502
IC5808
IC4101
IC6007
IC6006
IC6008
IC5802
X5701
X5101
X5801
X6002
JK5801
HDMI_IN1
JK5802
HDMI_IN2
HDMI1_A_AUDIO_IN
JK4101
HDMI2_A_AUDIO_IN
JK4102
P3401
LSJB3150-1
PbF
Ⓐ
Ⓑ
Ⓒ
LSJB3150

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

*1: REFER TO MAIN C.B.A. REPLACEMENT NOTE OF SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES.

MAIN CHILD C.B.A.
LSEP3186A


*1
C5182
IC5001
C5180
C5073
C5181
TP3
TP2
TP1
LSEP3186
Ⓒ
Ⓑ
Ⓐ

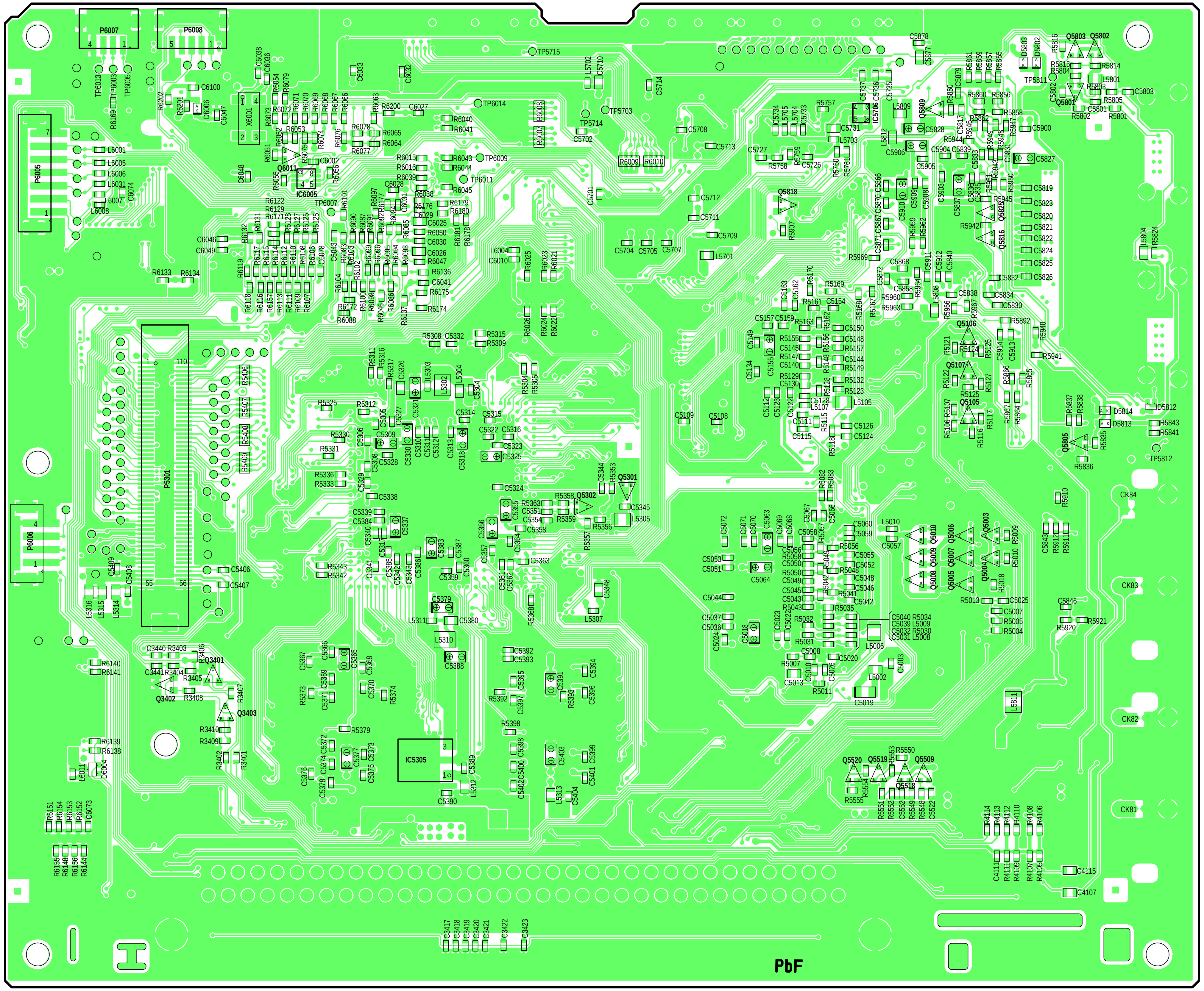
MAIN C.B.A. LSEB3150A
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

MAIN C.B.A. LSEB3150A (SUFFIX (VERSION) NUMBER①)

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

(FOIL SIDE)


P6007
P6008
P6005
P6006
P5301
IC6005
IC5305
X6001
Q5301
Q5302
Q3401
Q3402
Q3403
Q5801
Q5802
Q5803
Q5818
CK81
CK82
CK83
CK84
PbF

LSJB3150

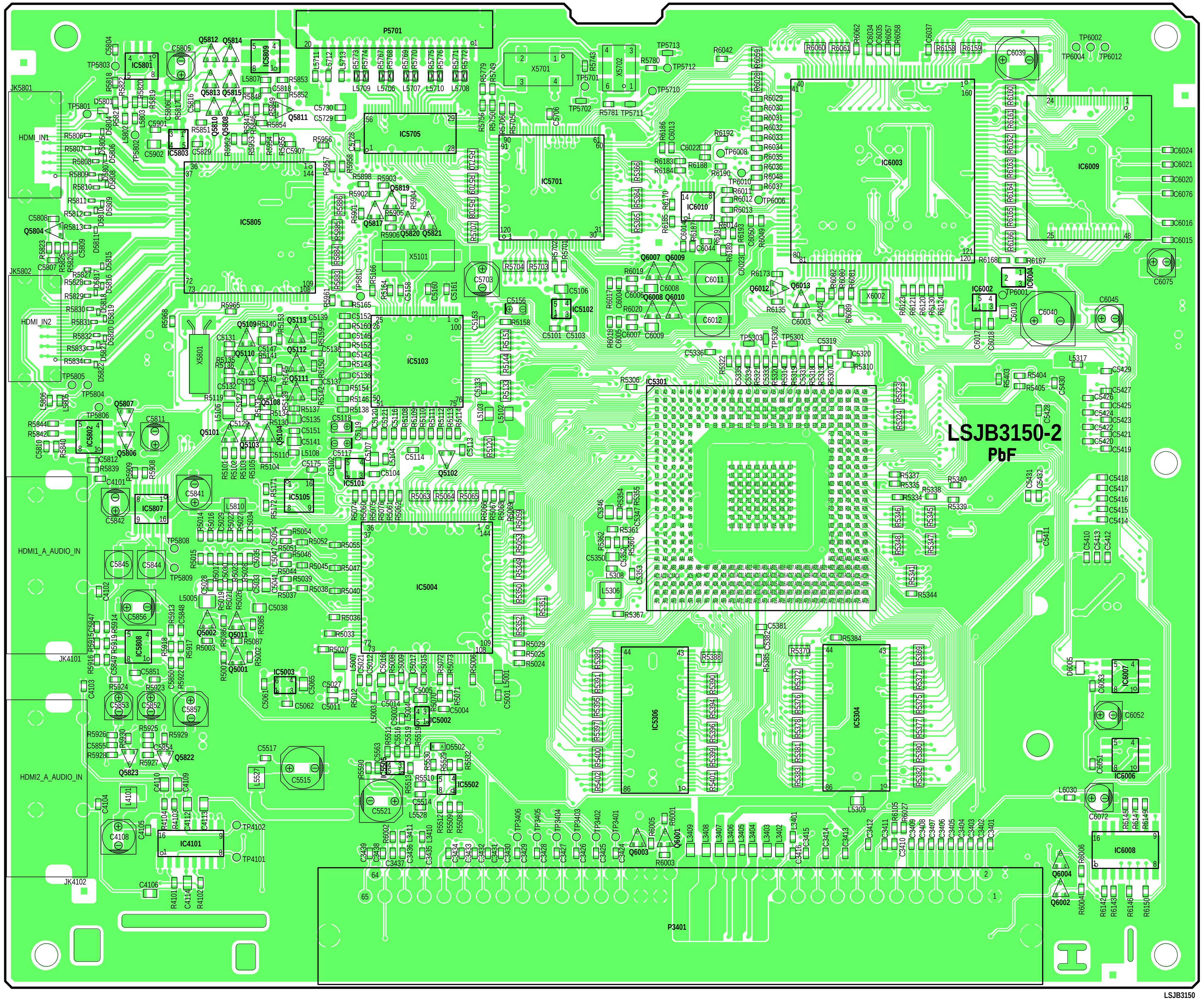
NOTE: MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

MAIN C.B.A. LSEB3150A

PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

MAIN C.B.A. LSEB3150A (SUFFIX (VERSION) NUMBER②)

(COMPONENT SIDE)


P5701
IC5801
IC5809
IC5803
IC5705
IC5701
IC6010
IC6003
IC6009
IC6002
IC5805
IC5103
IC5102
IC5301
IC5101
IC5105
IC5807
IC5802
IC5004
IC5003
IC5002
IC5502
IC5306
IC5304
IC6007
IC6006
IC6008
IC4101
X5701
X5702
X5101
X5801
X6002
JK5801
JK5802
HDMI_IN1
HDMI_IN2
HDMI1_A_AUDIO_IN
HDMI2_A_AUDIO_IN
JK4101
JK4102
P3401
LSJB3150-2
PbF
LSJB3150

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE: MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

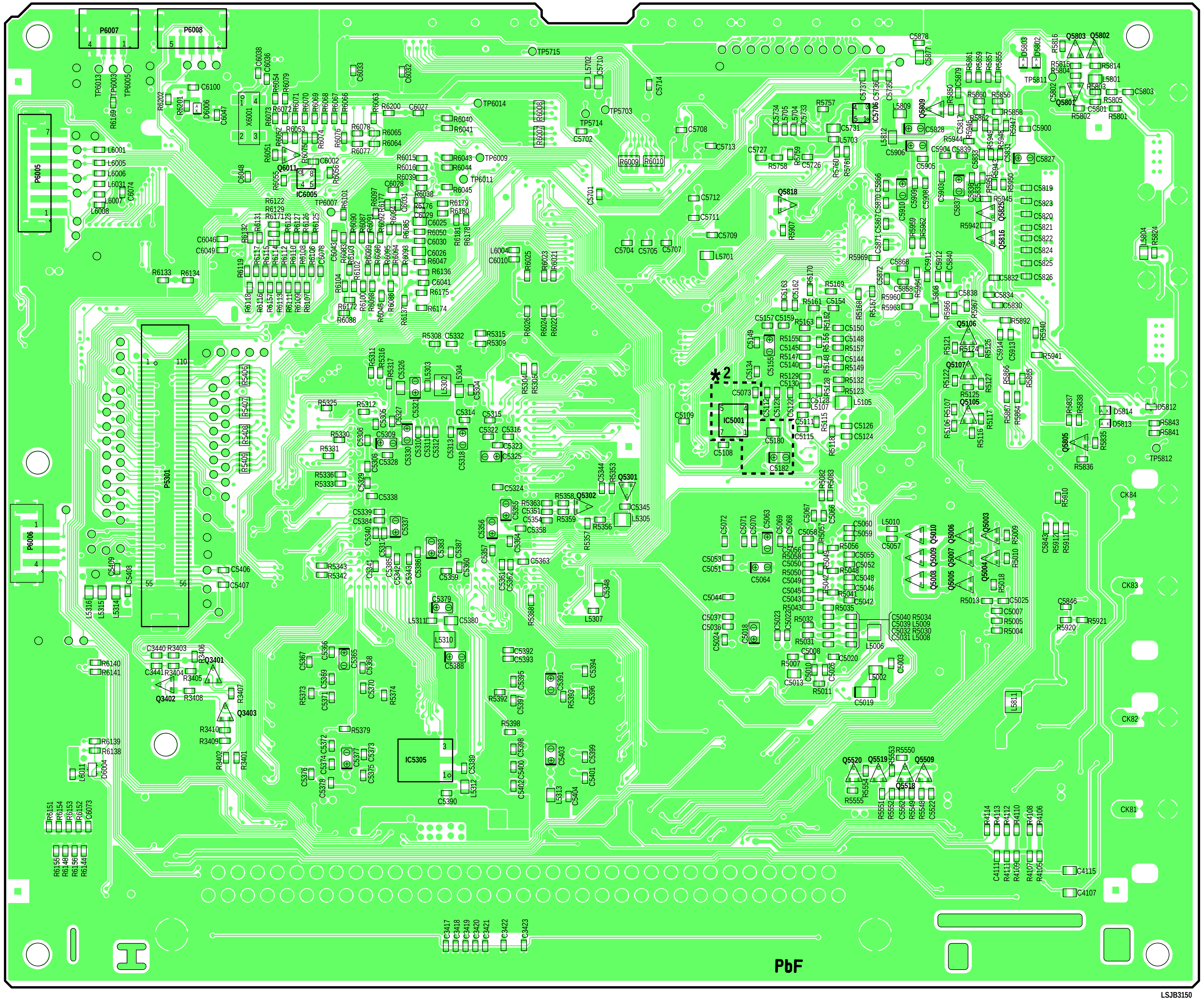
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

MAIN C.B.A. LSEB3150A

PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

MAIN C.B.A. LSEB3150A (SUFFIX (VERSION) NUMBER②)

(FOIL SIDE)


P6007
P6008
P6005
P6006
P5301
IC5001
IC5305
IC6005
Q6011
X6001
Q5301
Q5302
Q3401
Q3402
Q3403
Q5818
Q5801
Q5802
Q5803
Q5805
Q5106
Q5107
Q5105
Q5509
Q5518
Q5519
Q5520
CK81
CK82
CK83
CK84
TP5715
TP6014
TP5703
TP5714
TP6009
TP6011
TP5811
TP5812
*2
PbF
LSJB3150

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE: MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

*2: REFER TO MAIN C.B.A. REPLACEMENT NOTE OF SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES.

13.2. BASE C.B.A.

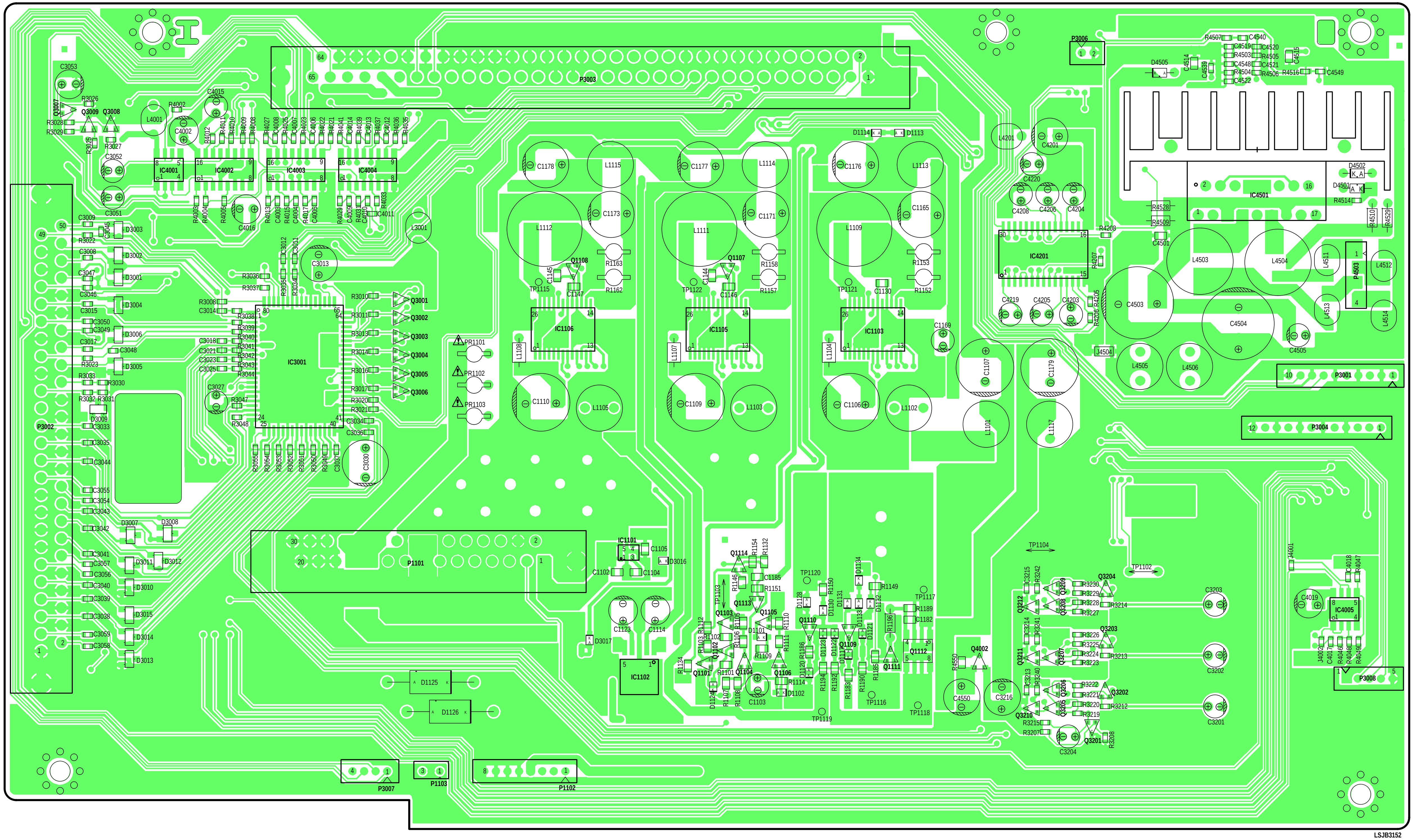
BASE C.B.A. LSEP3152A

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

(COMPONENT SIDE)


P3003
P3006
IC4501
IC4001
IC4002
IC4003
IC4004
IC3001
IC1106
IC1105
IC1103
IC4201
P3002
P3001
P3004
P1101
IC1101
IC1102
IC4005
P3008
P3007
P1103
P1102
PR1101
PR1102
PR1103
L1112
L1111
L1109
L1115
L1114
L1113
L4503
L4504
L4505
L4506
C4504
C4503
D1125
D1126
Q3001
Q3002
Q3003
Q3004
Q3005
Q3006
Q1108
Q1107
Q4002
J4001
LSJB3152

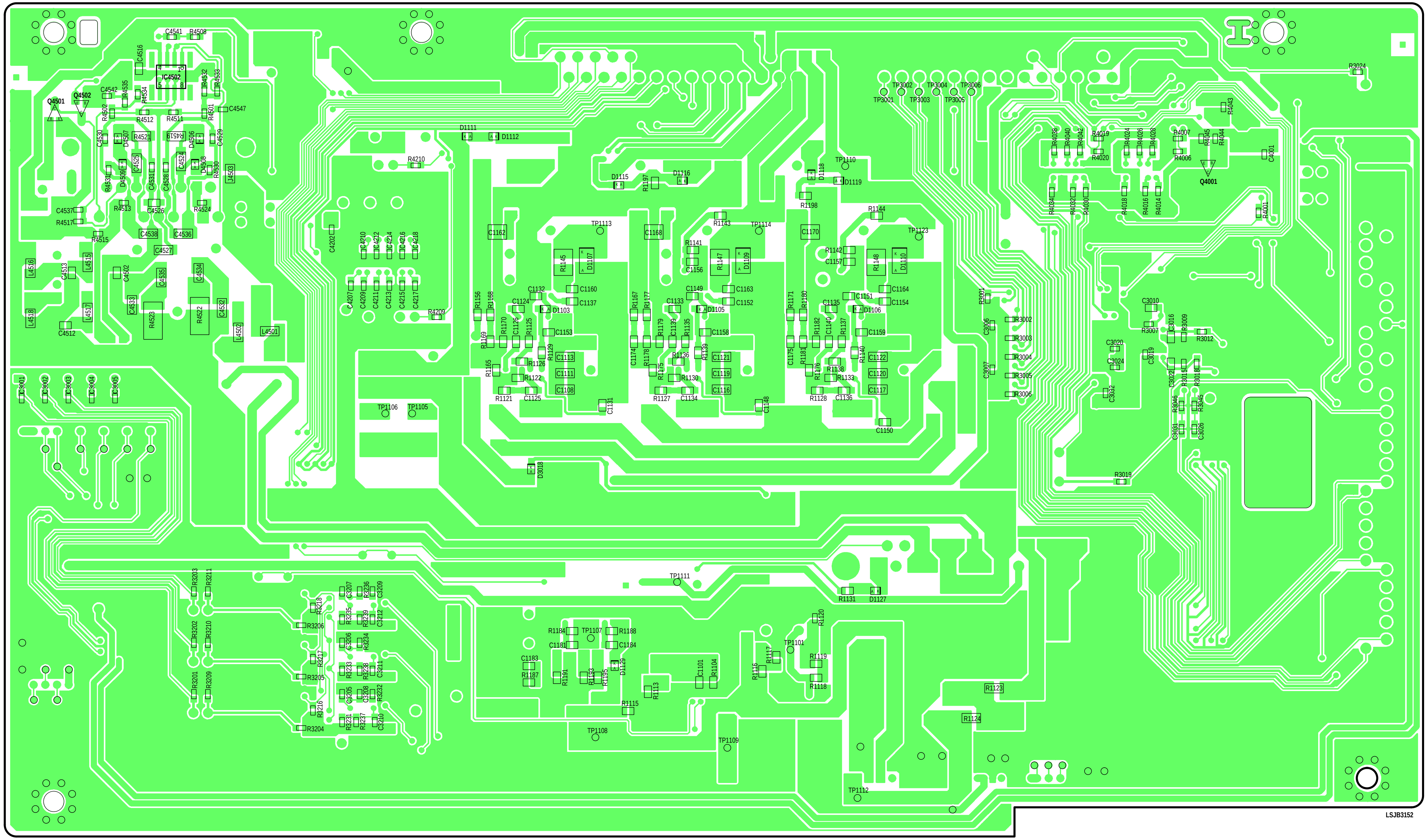
(DUAL PATTERNS)

BASE C.B.A. LSEP3152A

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

(FOIL SIDE)



IC4502
Q4501
Q4502
Q4001
C4541
R4508
C4516
C4542
R4535
R4534
R4532
R4533
R4512
R4511
R4501
C4547
R4521
D4507
D4506
C4529
C4525
C4524
R4531
D4509
D4508
R4530
J4503
R4513
C4526
R4524
C4537
R4517
R4515
C4538
C4536
C4527
L4516
C4513
L4515
C4502
C4535
C4534
L4518
L4517
C4533
R4523
R4522
C4532
L4502
L4501
C4512
D1111
D1112
R4210
C4202
C4210
C4212
C4214
C4216
C4218
C4207
C4209
C4211
C4213
C4215
C4217
R4209
D1115
R1197
D1116
D1118
TP1110
D1119
R1198
R1144
TP1113
TP1114
TP1123
R1143
C1162
C1168
C1170
R1141
R1142
C1157
C1156
R1145
D1107
R1147
D1109
R1148
D1110
C1132
C1160
C1137
C1124
D1103
C1149
C1163
C1152
C1133
D1105
C1151
C1164
C1154
C1135
D1106
R1156
R1168
R1167
R1177
R1171
R1180
C1153
C1158
C1159
R1169
R1170
C1126
R1125
R1179
C1139
R1135
R1182
C1140
R1137
R1129
R1139
R1140
R1126
C1113
C1111
C1108
C1121
C1119
C1116
C1122
C1120
C1117
R1165
R1122
R1121
C1125
C1131
C1174
R1178
R1176
R1136
R1130
R1127
C1134
C1175
R1181
R1178
R1138
R1133
R1128
C1136
C1148
C1150
TP1106
TP1105
D3018
TP3002
TP3004
TP3006
TP3001
TP3003
TP3005
R4038
R4040
R4042
R4019
R4020
R4024
R4026
R4028
R4007
R4006
R4045
R4044
R4043
C4001
R4034
R4032
R4030
R4018
R4016
R4014
R4001
R3024
R3001
R3002
R3003
R3004
R3005
R3006
C3006
C3007
C3010
R3007
C3016
R3009
R3012
C3020
C3024
C3019
C3032
C3022
R3015
R3018
R3046
R3045
C3031
C3026
R3019
IC3001
IC3002
IC3003
IC3004
IC3005
TP1111
R1131
D1127
R3203
R3211
R3218
R3206
R3202
R3210
R3217
R3205
R3201
R3209
R3216
R3204
C3207
R3236
C3209
R3235
R3239
C3212
C3206
R3234
R3233
R3238
C3211
C3205
C3208
R3232
R3231
R3237
C3210
R1184
TP1107
R1188
C1181
C1184
C1183
R1187
R1191
R1193
R1195
D1129
R1113
R1115
C1101
R1104
R1116
R1117
TP1101
R1120
R1119
R1118
R1123
R1124
TP1108
TP1109
TP1112
LSJB3152

(DUAL PATTERNS)

13.3. POWER C.B.A.

POWER C.B.A. LSEP3153A

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

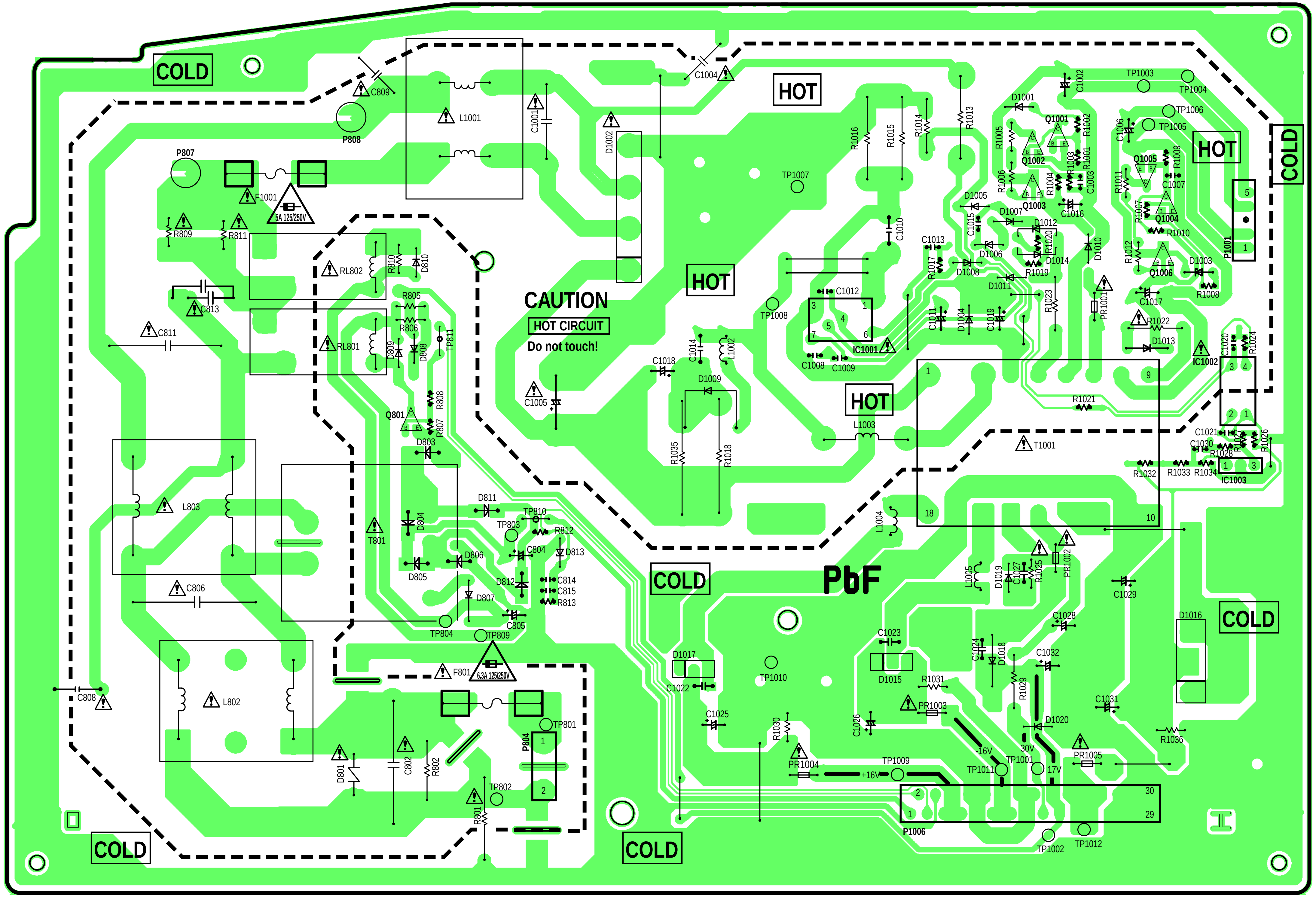
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

5A 125/250V

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 5A 125/250V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 5A 125/250V

6.3A 125V/250V

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 6.3A 125V/250V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 6.3A 125V/250V


COLD
HOT
CAUTION
HOT CIRCUIT
Do not touch!
PbF
P807
P808
F1001
5A 125/250V
C809
L1001
C1001
D1002
C1004
R1016
R1015
R1014
R1013
TP1007
D1001
C1002
Q1001
R1002
Q1002
R1005
R1006
R1004
R1003
R1001
C1003
Q1003
C1016
D1005
D1007
D1012
D1006
D1008
C1015
C1010
C1013
R1017
R1019
R1020
D1014
D1010
TP1003
TP1004
TP1006
TP1005
C1006
Q1005
R1009
C1007
R1011
R1007
Q1004
R1010
R1012
D1003
Q1006
R1008
P1001
C1017
R1022
D1013
PR1001
IC1002
C1020
R1024
R1809
R809
R811
RL802
R810
D810
R805
R806
C813
C811
RL801
D809
D808
TP811
Q801
R808
R807
D803
D811
TP810
TP803
R812
C804
D813
D804
T801
D806
D805
D812
C814
C815
R813
D807
C805
TP804
TP809
L803
C806
C808
L802
F801
6.3A 125/250V
TP801
P804
D801
C802
R802
TP802
R801
C1018
C1014
L1002
D1009
TP1008
C1012
IC1001
C1008
C1009
C1011
D1004
C1019
R1023
D1011
R1035
R1018
L1003
R1021
T1001
C1021
C1030
R1028
R1026
R1032
R1033
R1034
IC1003
L1004
L1005
D1019
C1027
R1025
PR1002
C1029
D1016
C1028
C1023
C1024
D1018
C1032
D1017
C1022
TP1010
D1015
R1031
R1029
PR1003
C1025
R1030
C1026
D1020
C1031
R1036
PR1004
-16V
TP1009
+16V
30V
TP1001
TP1011
17V
PR1005
P1006
TP1002
TP1012
LSJB3153

HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.

POWER C.B.A. LSEP3153A
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

13.4. BALLAST C.B.A.

BALLAST C.B.A. LSEB3163A
(COMPONENT SIDE)

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 5A 125/250V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 5A 125/250V

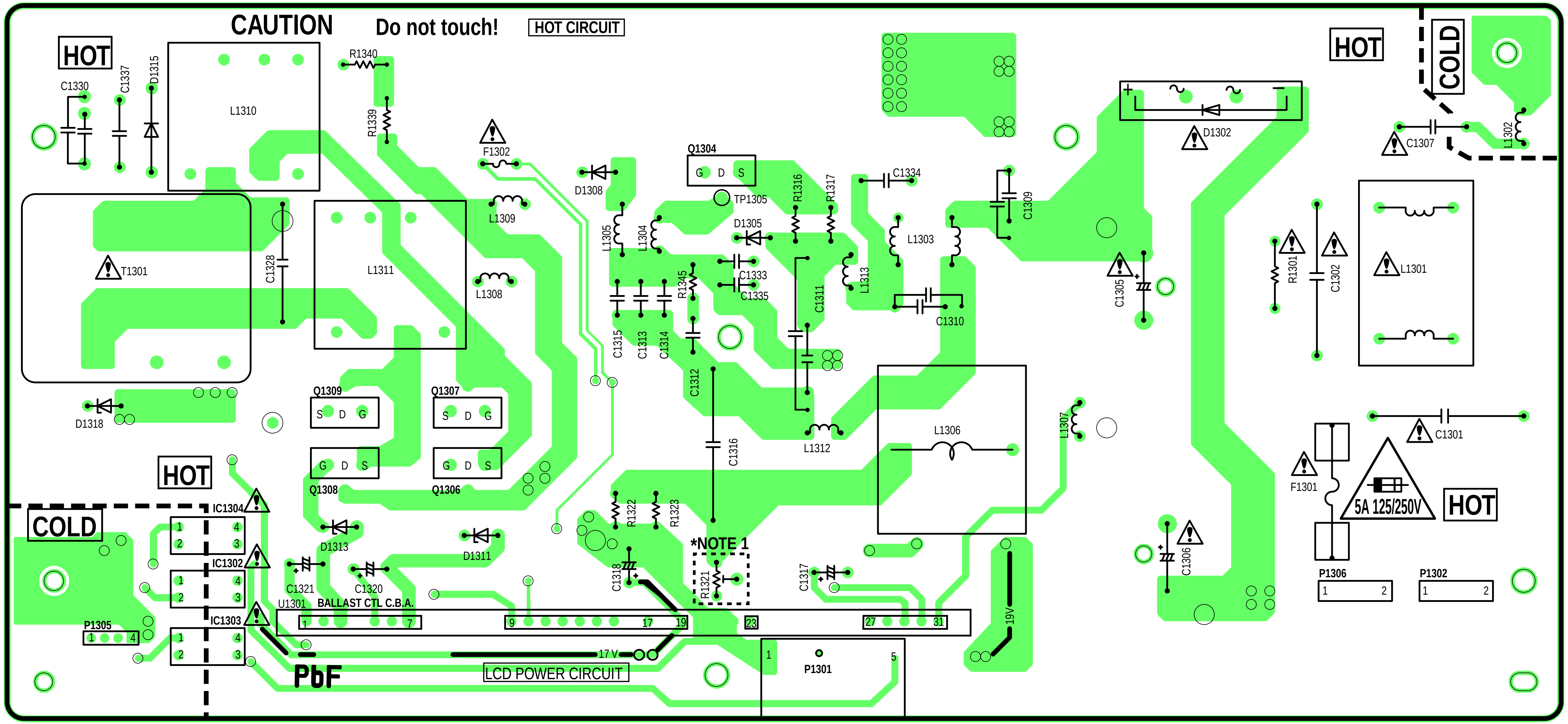
5A 125/250V

F1302 REPLACEMENT NOTE:
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE NUMBER K5C117BC0003 (117 ℃).
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE NUMÉRO K5C117BC0003 (117 ℃)

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

***NOTE 1:**
WHEN SERVICING BALLAST C.B.A., DO NOT TURN THE VARIABLE RESISTOR
(R1321) ON THE BALLAST C.B.A.


CAUTION
Do not touch!
HOT CIRCUIT
HOT
C1330
C1337
D1315
L1310
R1340
R1339
F1302
D1308
L1309
Q1304
G D S
TP1305
D1305
R1316
R1317
C1334
L1303
C1309
D1302
HOT
COLD
C1307
L1302
T1301
C1328
L1311
L1308
L1305
L1304
C1315
C1313
C1314
R1345
C1333
C1335
C1311
L1313
C1310
C1305
R1301
C1302
L1301
D1318
Q1309
S D G
Q1307
S D G
C1312
C1316
L1312
L1306
L1307
C1301
HOT
G D S
Q1308
G D S
Q1306
COLD
IC1304
IC1302
IC1303
D1313
D1311
R1322
R1323
*NOTE 1
C1318
R1321
C1317
C1321
C1320
U1301
BALLAST CTL C.B.A.
P1305
1
4
1
7
9
17
19
23
27
31
17 V
19V
PbF
LCD POWER CIRCUIT
P1301
1
5
F1301
5A 125/250V
HOT
C1306
P1306
1 2
P1302
1 2
LSJB3163

HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.

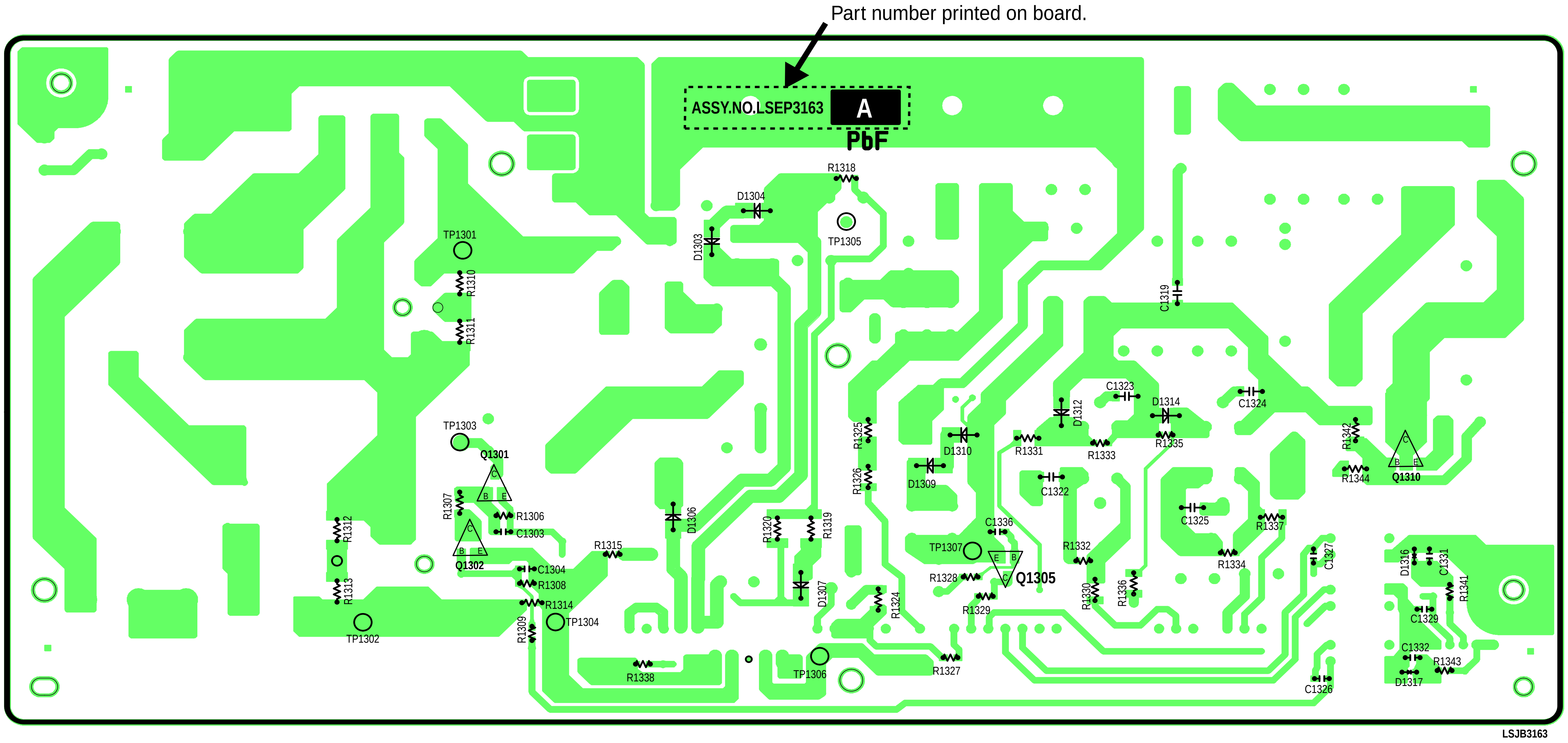
(DUAL PATTERNS)

BALLAST C.B.A. LSEB3163A

(FOIL SIDE)

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.


Part number printed on board.
ASSY.NO.LSEP3163
A
PbF
R1318
D1304
TP1305
D1303
TP1301
R1310
R1311
C1319
C1323
D1314
C1324
D1312
D1310
R1331
R1333
R1335
R1325
R1326
D1309
C1322
R1342
R1344
Q1310
C
B
E
TP1303
Q1301
R1307
R1306
C1303
Q1302
R1312
R1313
TP1302
C1304
R1308
R1314
R1309
TP1304
R1315
D1306
R1320
R1319
C1336
TP1307
Q1305
R1328
R1329
R1332
R1334
C1325
R1337
R1330
R1336
C1327
D1316
C1331
R1341
C1329
C1332
R1343
D1317
C1326
R1327
R1324
D1307
TP1306
R1338
LSJB3163

(DUAL PATTERNS)

13.5. LCD DRIVE C.B.A.

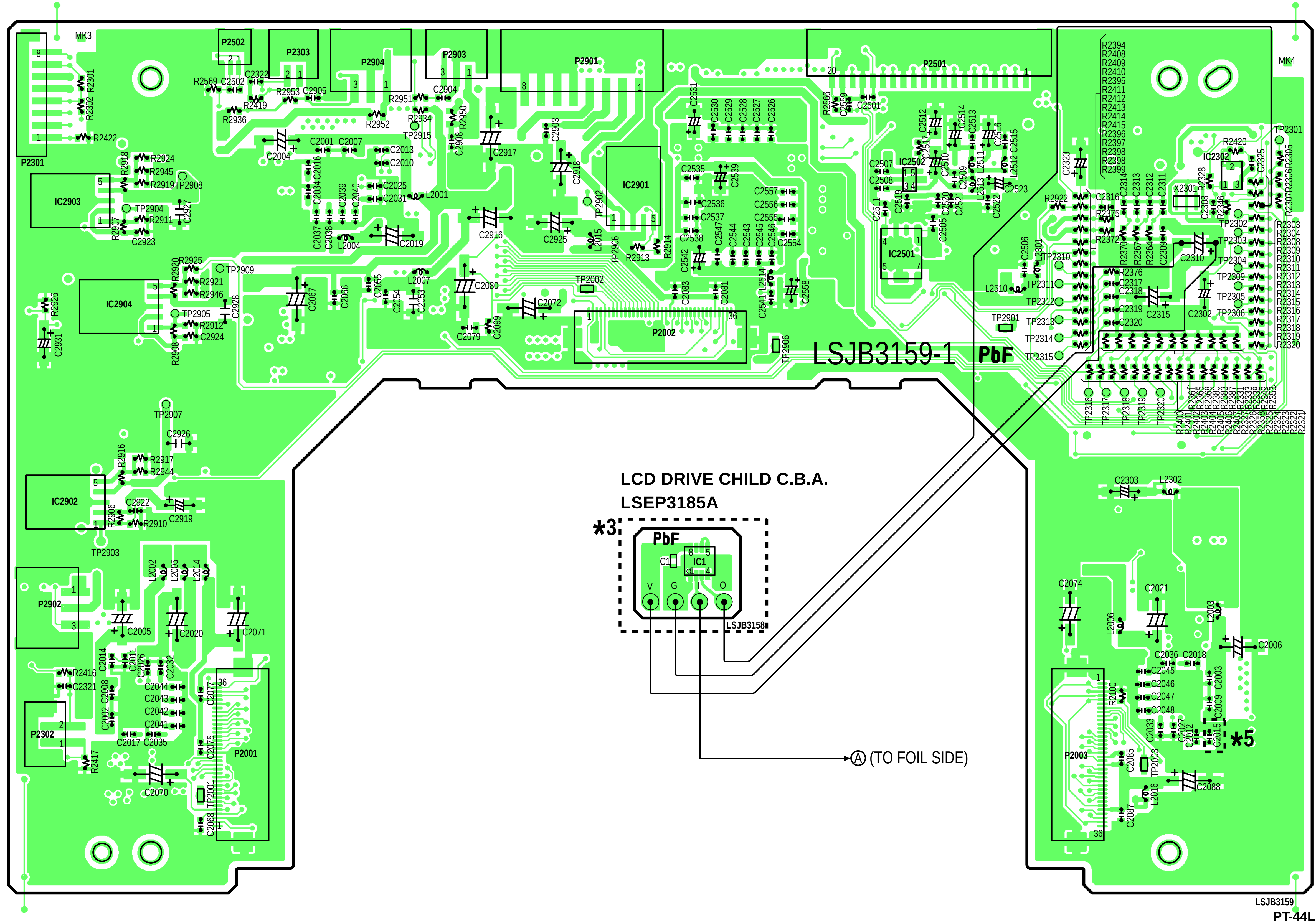
LCD DRIVE C.B.A. LSXA0625FL (SUFFIX (VERSION) NUMBER ①, ②) (COMPONENT SIDE)

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN
FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH
SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

*3, *5: REFER TO LCD DRIVE C.B.A. REPLACEMENT NOTE OF SCHEMATIC
DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES.


MK3
MK4
P2301
P2502
P2303
P2904
P2903
P2901
P2501
P2002
P2902
P2302
P2001
P2003
IC2903
IC2904
IC2902
IC2901
IC2501
IC2502
IC2302
LSJB3159-1
PbF
LCD DRIVE CHILD C.B.A.
LSEP3185A
*3
PbF
IC1
C1
V
G
I
O
LSJB3158
Ⓐ (TO FOIL SIDE)
*5
LSJB3159

LCD DRIVE C.B.A. LSXA0625FL
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

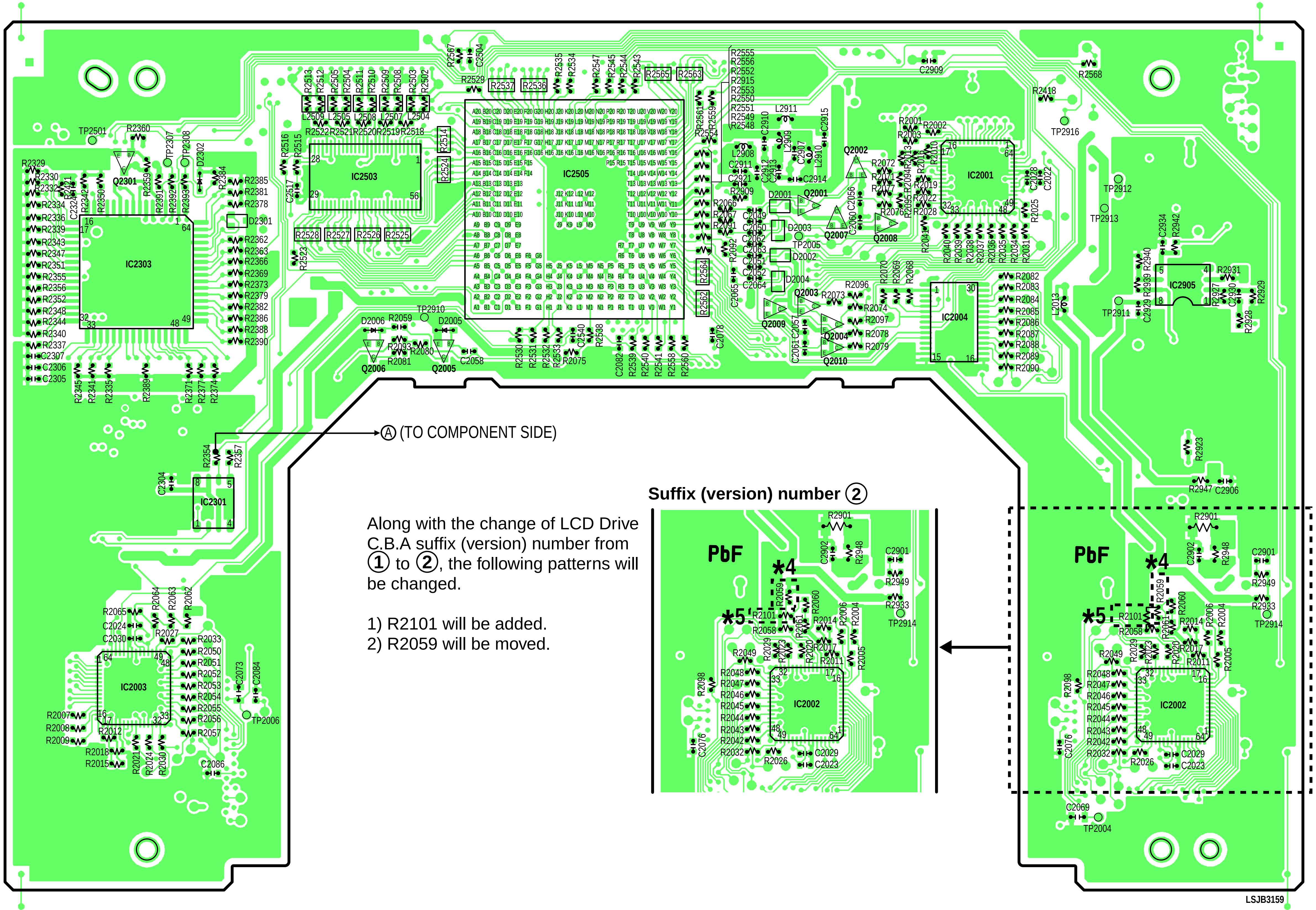
LCD DRIVE C.B.A. LSXA0625FL (SUFFIX (VERSION) NUMBER ① , ②)
(FOIL SIDE)

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

*4, *5: REFER TO LCD DRIVE C.B.A. REPLACEMENT NOTE OF SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES.


IC2303
IC2503
IC2505
IC2001
IC2905
IC2004
IC2301
IC2003
IC2002
Q2301
Q2001
Q2002
Q2003
Q2004
Q2006
Q2005
Q2007
Q2008
Q2009
Q2010
D2301
D2302
D2001
D2002
D2003
D2004
D2005
D2006
TP2501
TP2307
TP2308
TP2910
TP2005
TP2916
TP2912
TP2913
TP2911
TP2006
TP2004
TP2914
L2911
L2908
L2910
L2913
(A) (TO COMPONENT SIDE)
PbF
*4
*5
R2101
R2059
LSJB3159

Suffix (version) number ②

Along with the change of LCD Drive C.B.A suffix (version) number from ① to ②, the following patterns will be changed.

1) R2101 will be added.
2) R2059 will be moved.

LCD DRIVE C.B.A. LSXA0625FL
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

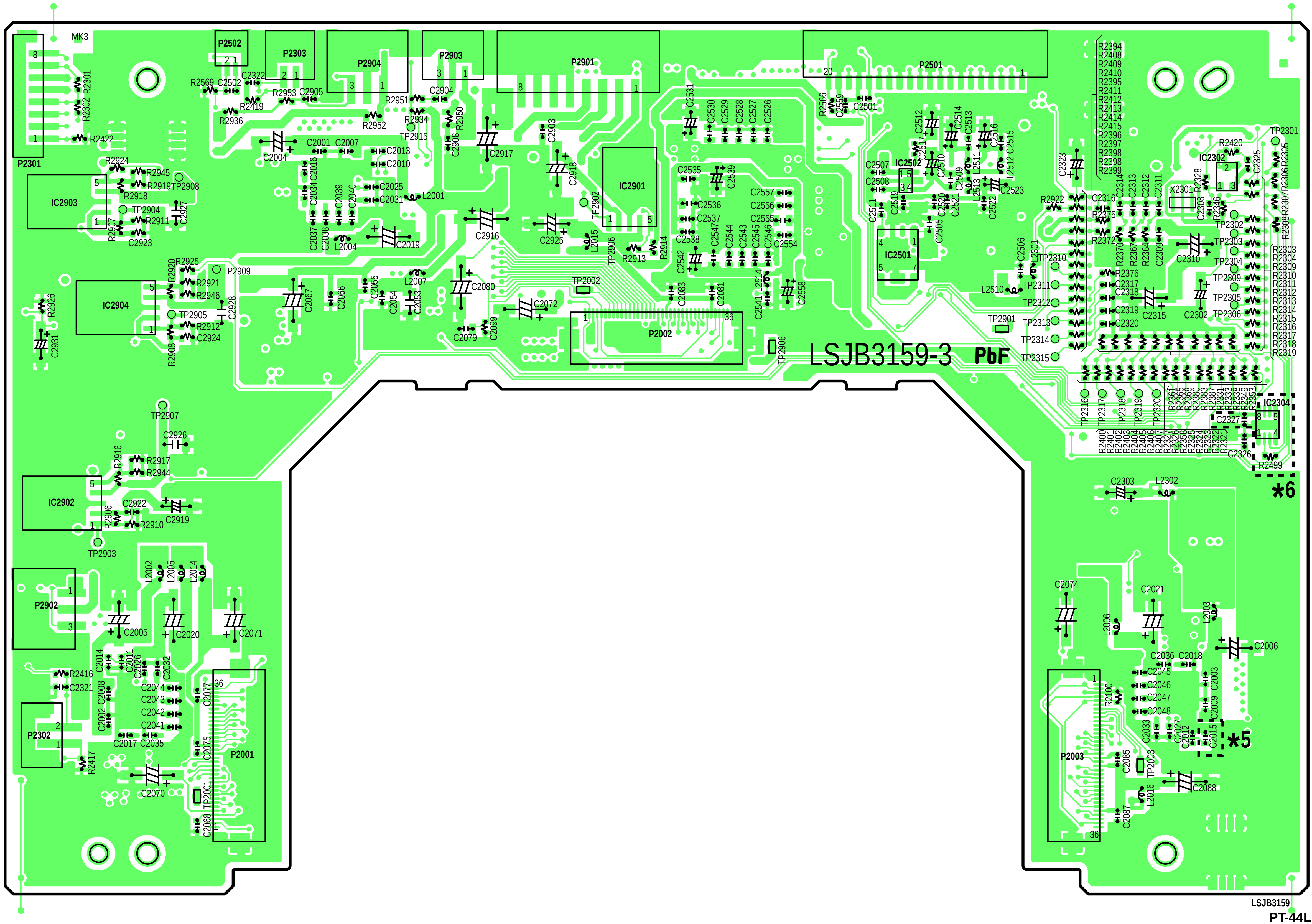
LCD DRIVE C.B.A. LSXA0625FL (SUFFIX (VERSION) NUMBER③) (COMPONENT SIDE)

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

*5, *6: REFER TO LCD DRIVE C.B.A. REPLACEMENT NOTE OF SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES.


MK3
P2301
P2502
P2303
P2904
P2903
P2901
P2501
IC2903
IC2904
IC2902
IC2901
IC2502
IC2501
IC2302
IC2304
X2301
P2002
P2902
P2302
P2001
P2003
LSJB3159-3
PbF
*6
*5
LSJB3159

LCD DRIVE C.B.A. LSXA0625FL
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

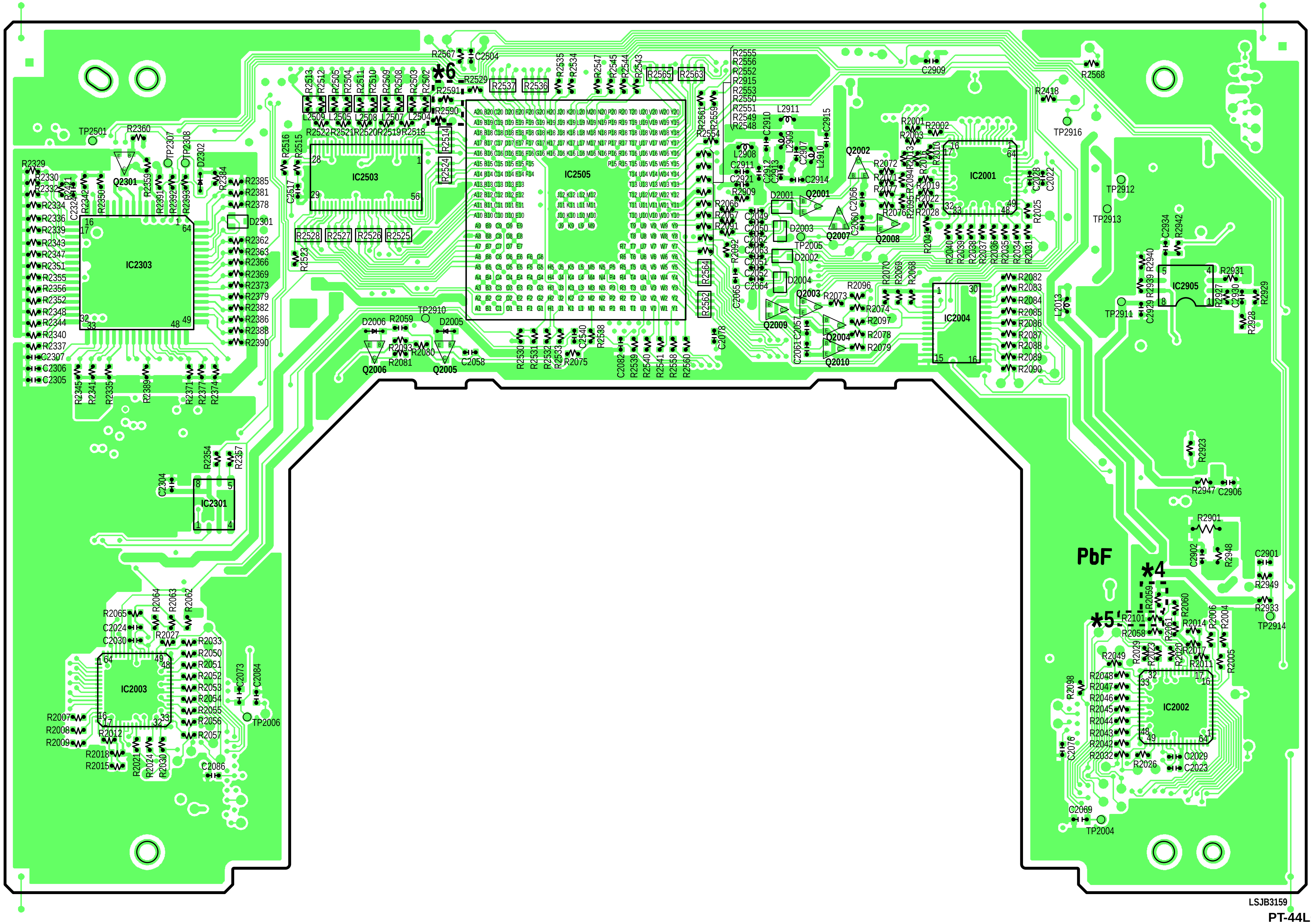
LCD DRIVE C.B.A. LSXA0625FL (SUFFIX (VERSION) NUMBER③) (FOIL SIDE)

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

*4, *5, *6: REFER TO LCD DRIVE C.B.A. REPLACEMENT NOTE OF SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES.


IC2303
IC2301
IC2003
IC2503
IC2505
IC2004
IC2001
IC2905
IC2002
Q2301
Q2001
Q2002
Q2003
Q2004
Q2005
Q2006
Q2007
Q2008
Q2009
Q2010
D2001
D2002
D2003
D2004
D2005
D2006
D2301
D2302
TP2501
TP2307
TP2308
TP2910
TP2005
TP2006
TP2004
TP2916
TP2912
TP2913
TP2911
TP2914
L2504
L2505
L2507
L2508
L2509
L2908
L2910
L2911
L2013
*4
*5
*6
PbF
LSJB3159

LCD DRIVE C.B.A. LSXA0625FL
PT-44LCX65-K/PT-52LCX65-K/PT-61LCX65-K

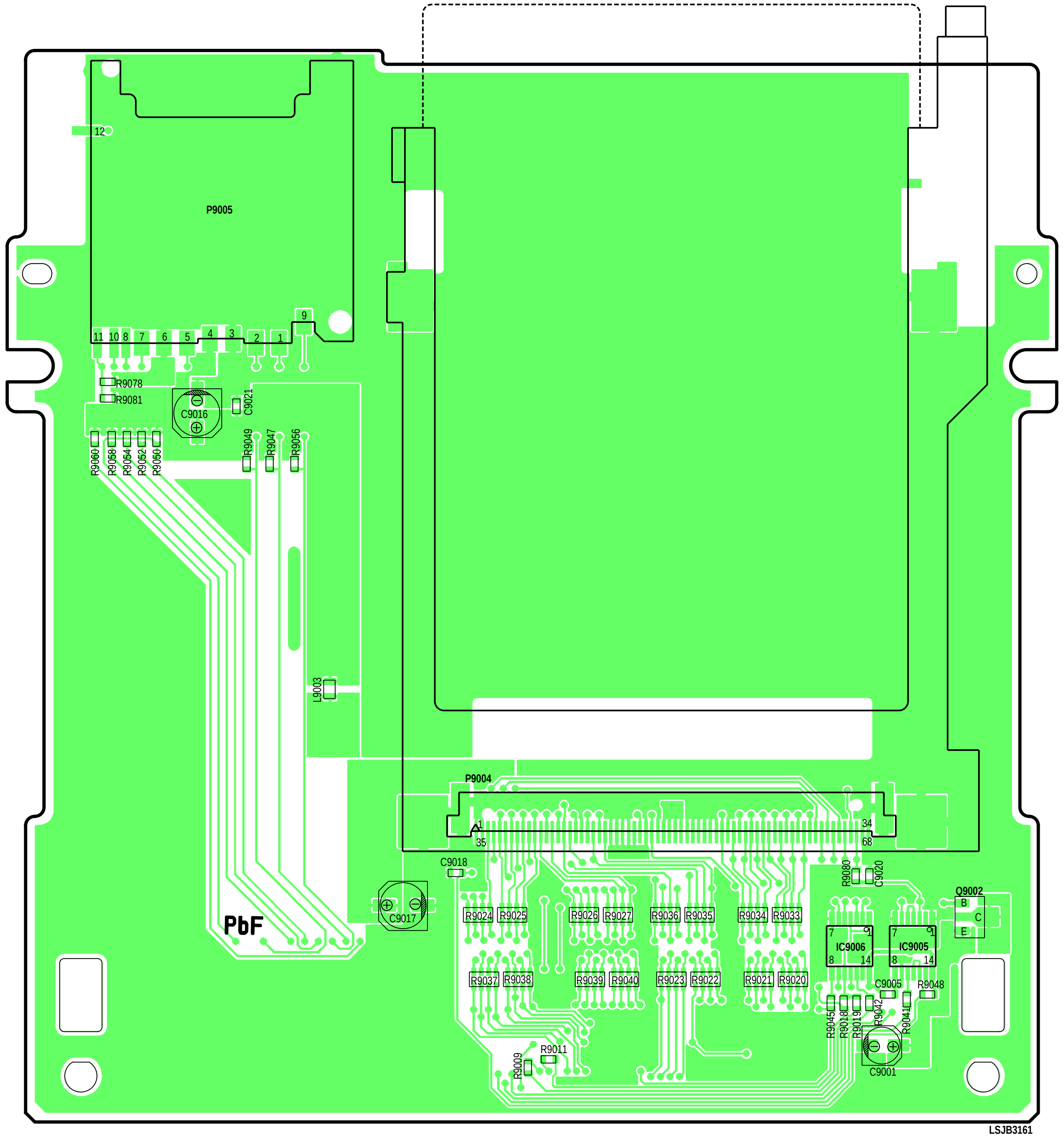
13.6. CARD C.B.A.

CARD C.B.A. LSEB3161A

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

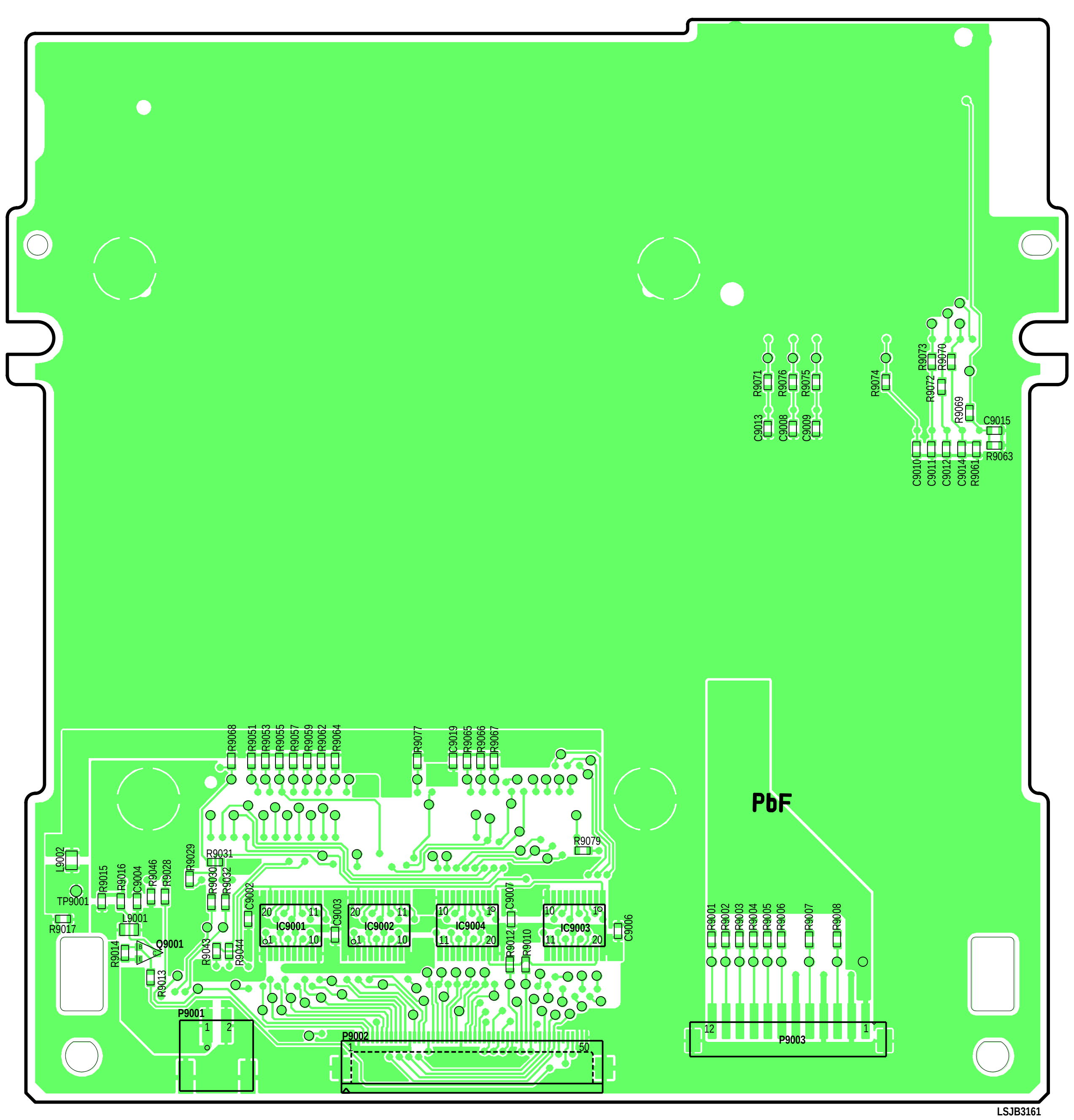
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

(COMPONENT SIDE)


P9005
12
11 10 8 7 6 5 4 3 2 1
9
R9078
R9081
C9016
C9021
R9060
R9058
R9064
R9062
R9059
R9049
R9047
R9056
L9003
P9004
35
1
34
68
C9018
C9017
PbF
R9024 R9025
R9026 R9027
R9036 R9035
R9034 R9033
R9037 R9038
R9039 R9040
R9023 R9022
R9021 R9020
R9080
C9020
Q9002
B
C
E
IC9006
IC9005
C9005
R9048
R9045
R9018
R9019
R9042
R9041
R9009
R9011
C9001
LSJB3161

(DUAL PATTERNS)

(FOIL SIDE)


R9071
R9076
R9075
R9074
R9073
R9072
R9070
R9069
C9013
C9008
C9009
C9015
R9063
C9010
C9011
C9012
C9014
R9061
R9068
R9051
R9053
R9055
R9057
R9059
R9062
R9064
R9077
C9019
R9065
R9066
R9067
PbF
R9079
L9002
TP9001
R9017
R9015
R9016
C9004
R9046
R9028
R9029
R9031
R9030
R9032
C9002
L9001
R9014
Q9001
R9013
R9043
R9044
C9003
IC9001
IC9002
IC9004
IC9003
C9007
R9012
R9010
C9006
R9001
R9002
R9003
R9004
R9005
R9006
R9007
R9008
P9001
1
2
P9002
50
P9003
12
1
LSJB3161

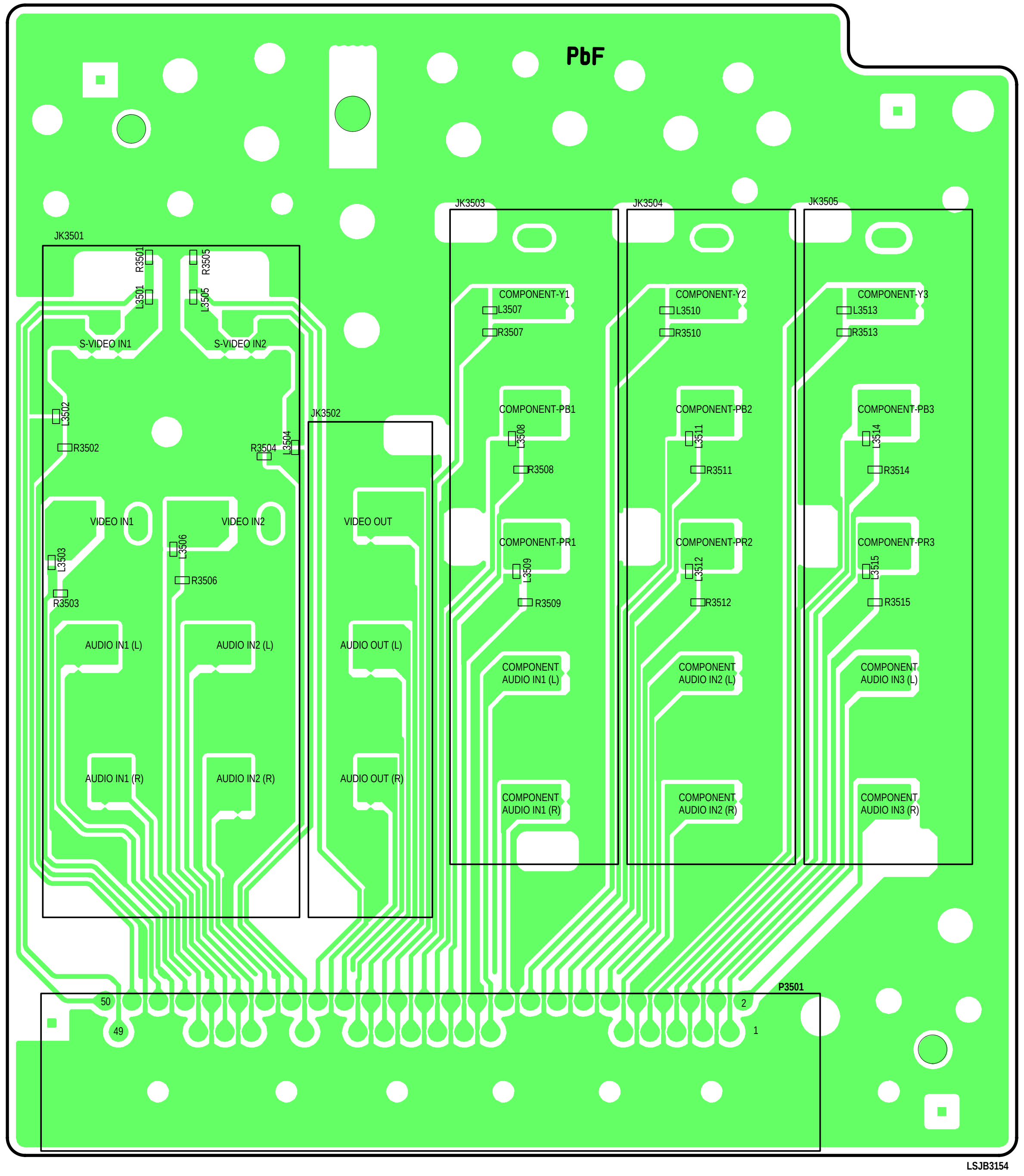
(DUAL PATTERNS)

13.7. REAR JACK C.B.A

REAR JACK C.B.A. LSEP3154A

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

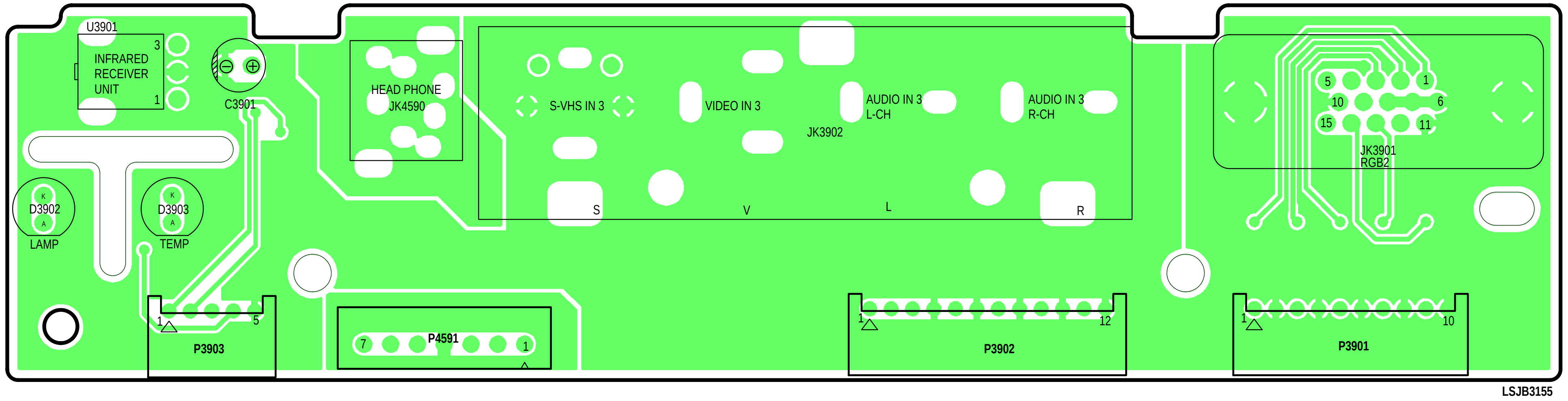
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.


PbF
JK3501
R3501
L3501
R3505
L3505
S-VIDEO IN1
S-VIDEO IN2
L3502
R3502
R3504
L3504
JK3502
VIDEO IN1
VIDEO IN2
VIDEO OUT
L3503
R3503
L3506
R3506
AUDIO IN1 (L)
AUDIO IN2 (L)
AUDIO OUT (L)
AUDIO IN1 (R)
AUDIO IN2 (R)
AUDIO OUT (R)
JK3503
JK3504
JK3505
COMPONENT-Y1
L3507
R3507
COMPONENT-Y2
L3510
R3510
COMPONENT-Y3
L3513
R3513
COMPONENT-PB1
L3508
R3508
COMPONENT-PB2
L3511
R3511
COMPONENT-PB3
L3514
R3514
COMPONENT-PR1
L3509
R3509
COMPONENT-PR2
L3512
R3512
COMPONENT-PR3
L3515
R3515
COMPONENT AUDIO IN1 (L)
COMPONENT AUDIO IN2 (L)
COMPONENT AUDIO IN3 (L)
COMPONENT AUDIO IN1 (R)
COMPONENT AUDIO IN2 (R)
COMPONENT AUDIO IN3 (R)
P3501
50
49
2
1
LSJB3154

13.8. FRONT JACK C.B.A.

FRONT JACK C.B.A. LSEP3155A

(COMPONENT SIDE)

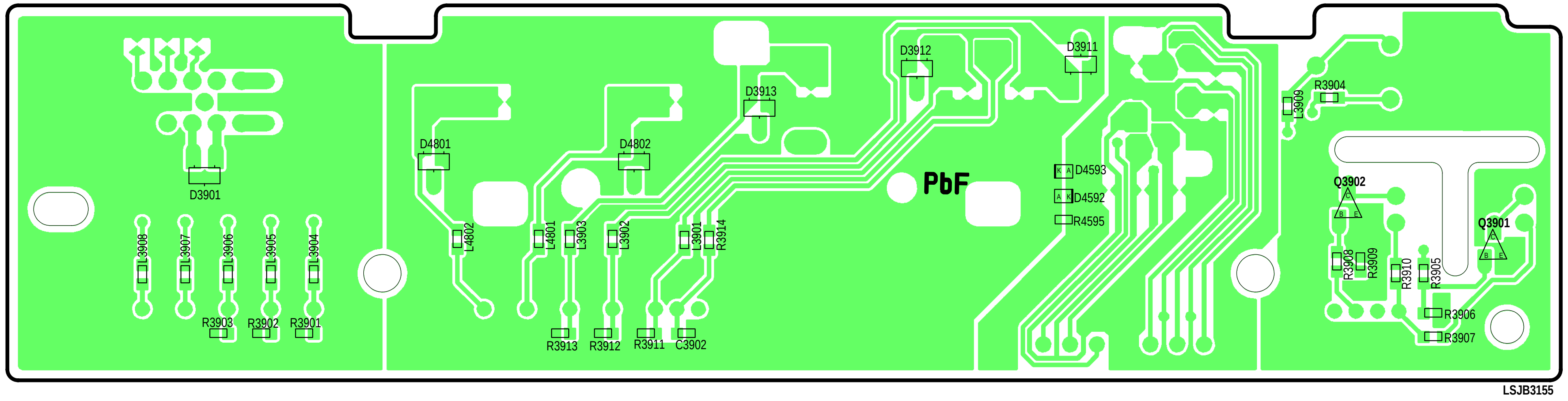

U3901
INFRARED RECEIVER UNIT
3
1
C3901
HEAD PHONE
JK4590
S-VHS IN 3
VIDEO IN 3
AUDIO IN 3
L-CH
AUDIO IN 3
R-CH
JK3902
S
V
L
R
5
1
10
6
15
11
JK3901
RGB2
K
D3902
A
LAMP
K
D3903
A
TEMP
1
5
P3903
7
P4591
1
1
12
P3902
1
10
P3901
LSJB3155

(DUAL PATTERNS)

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

(FOIL SIDE)


D3901
L3908
L3907
L3906
L3905
L3904
R3903
R3902
R3901
D4801
L4802
D4802
L4801
L3903
L3902
L3901
R3914
R3913
R3912
R3911
C3902
D3913
D3912
D3911
PbF
D4593
D4592
R4595
L3909
R3904
Q3902
Q3901
R3908
R3909
R3910
R3905
R3906
R3907
LSJB3155

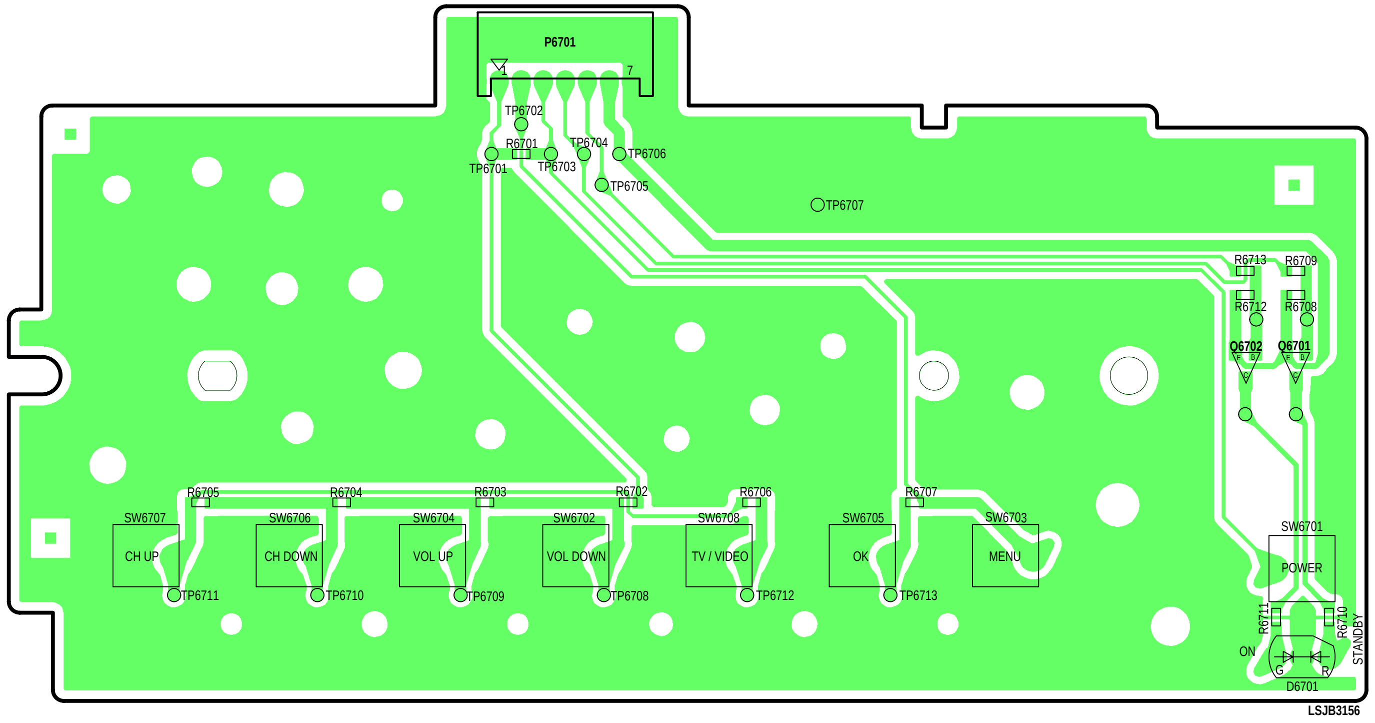
(DUAL PATTERNS)

13.9. OPERATION C.B.A. / THERMISTOR 1 C.B.A. / THERMISTOR 2 C.B.A. / COVER SWITCH C.B.A.

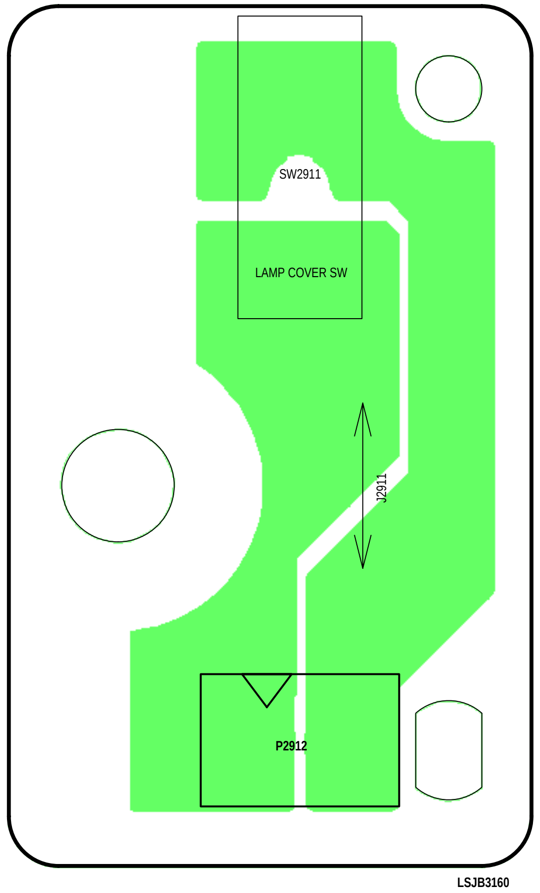
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST FOR PROPER PARTS CONTENT.

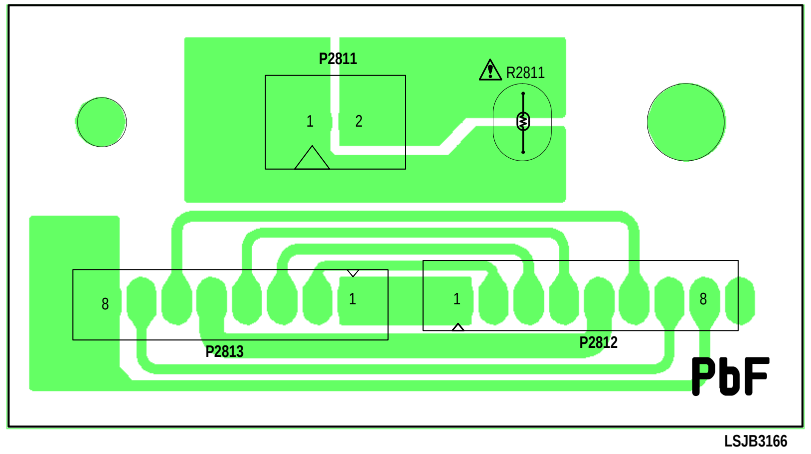
OPERATION C.B.A. LSEP3156A


P6701
1
7
TP6702
R6701
TP6704
TP6706
TP6701
TP6703
TP6705
TP6707
R6713
R6709
R6712
R6708
Q6702
Q6701
E
B
C
R6705
R6704
R6703
R6702
R6706
R6707
SW6707
SW6706
SW6704
SW6702
SW6708
SW6705
SW6703
SW6701
CH UP
CH DOWN
VOL UP
VOL DOWN
TV / VIDEO
OK
MENU
POWER
TP6711
TP6710
TP6709
TP6708
TP6712
TP6713
R6711
R6710
ON
STANDBY
G
R
D6701
LSJB3156

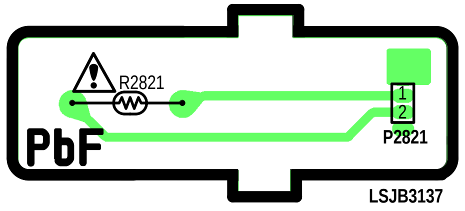
COVER SWITCH C.B.A. LSEP3160A


SW2911
LAMP COVER SW
J2911
P2912
LSJB3160

THERMISTOR 1 C.B.A. LSEP3166A


P2811
⚠ R2811
1
2
8
1
1
8
P2813
P2812
PbF
LSJB3166

THERMISTOR 2 C.B.A. LSEB3137A


⚠ R2821
1
2
P2821
PbF
LSJB3137

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

14 EXPLODED VIEWS (CABINET SECTION)

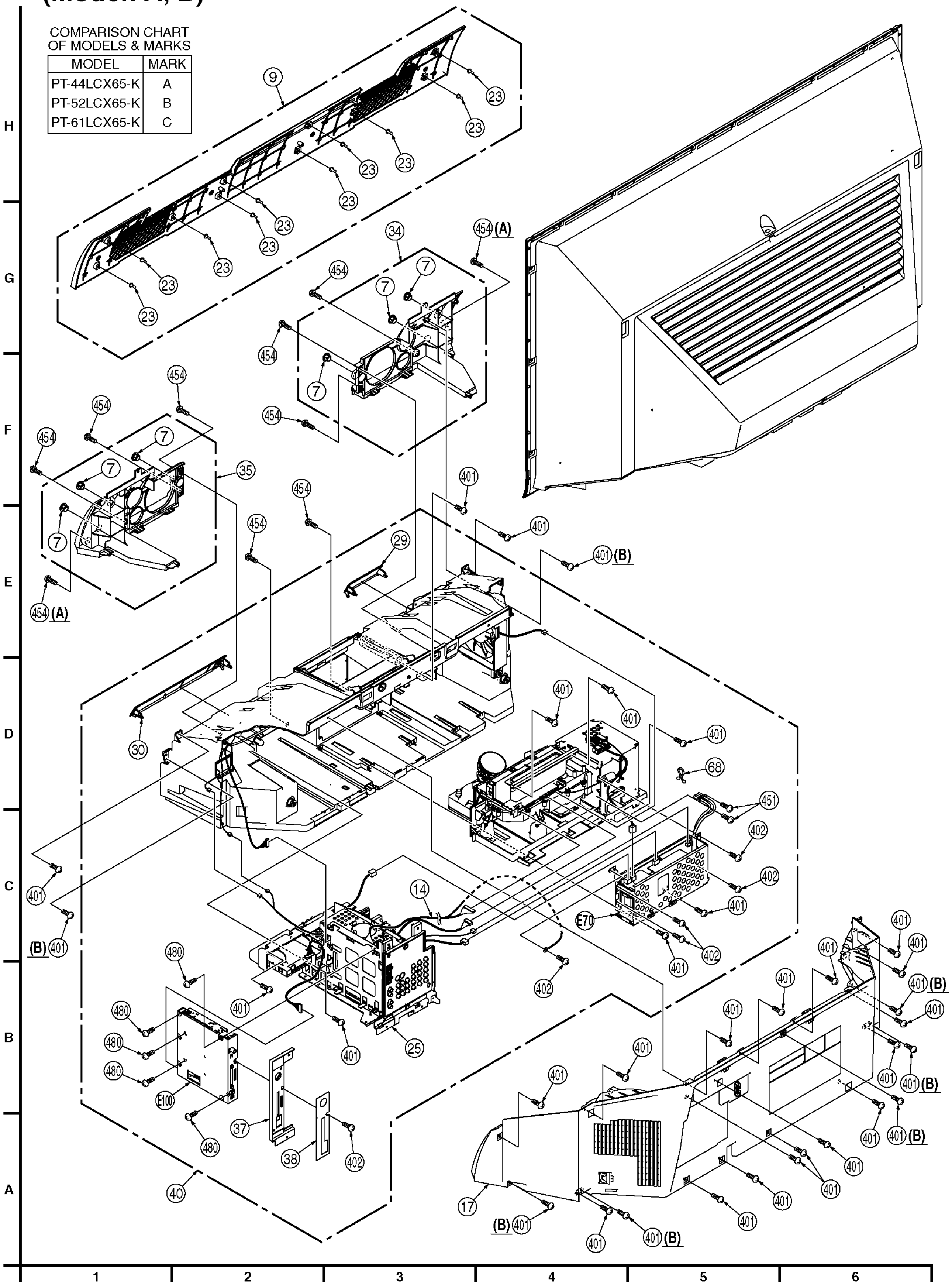
14.1. MAIN PARTS SECTION

❶ 44/52 INCH MAIN PARTS SECTION (Model: A, B)

Note: Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.

COMPARISON CHART OF MODELS & MARKS

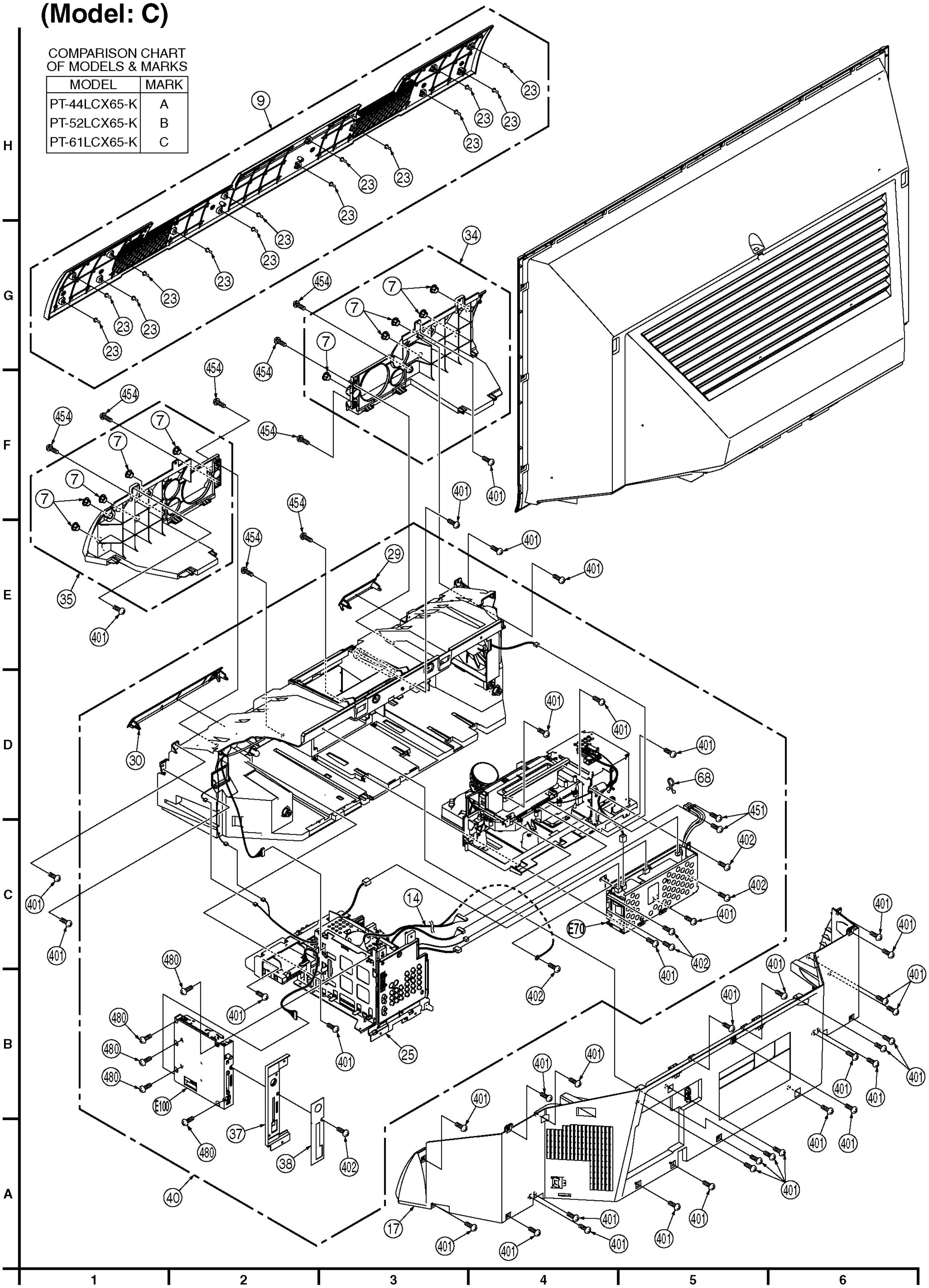
MODEL	MARK
PT-44LCX65-K	A
PT-52LCX65-K	B
PT-61LCX65-K	C


H
G
F
E
D
C
B
A
1
2
3
4
5
6
9
23
23
23
23
23
23
23
23
23
23
23
34
454 (A)
454
7
7
454
7
454
454
454
454
7
7
7
35
7
454 (A)
454
454
29
401
401
401 (B)
401
401
401
68
451
402
402
401
E70
402
401
402
30
14
401
(B) 401
480
480
480
480
E100
480
401
401
25
37
38
402
40
401
401
401
401
401 (B)
401
401
401 (B)
401
401 (B)
401
401
401
401
17
(B) 401
401
401 (B)

❶ 61 INCH MAIN PARTS SECTION
(Model: C)

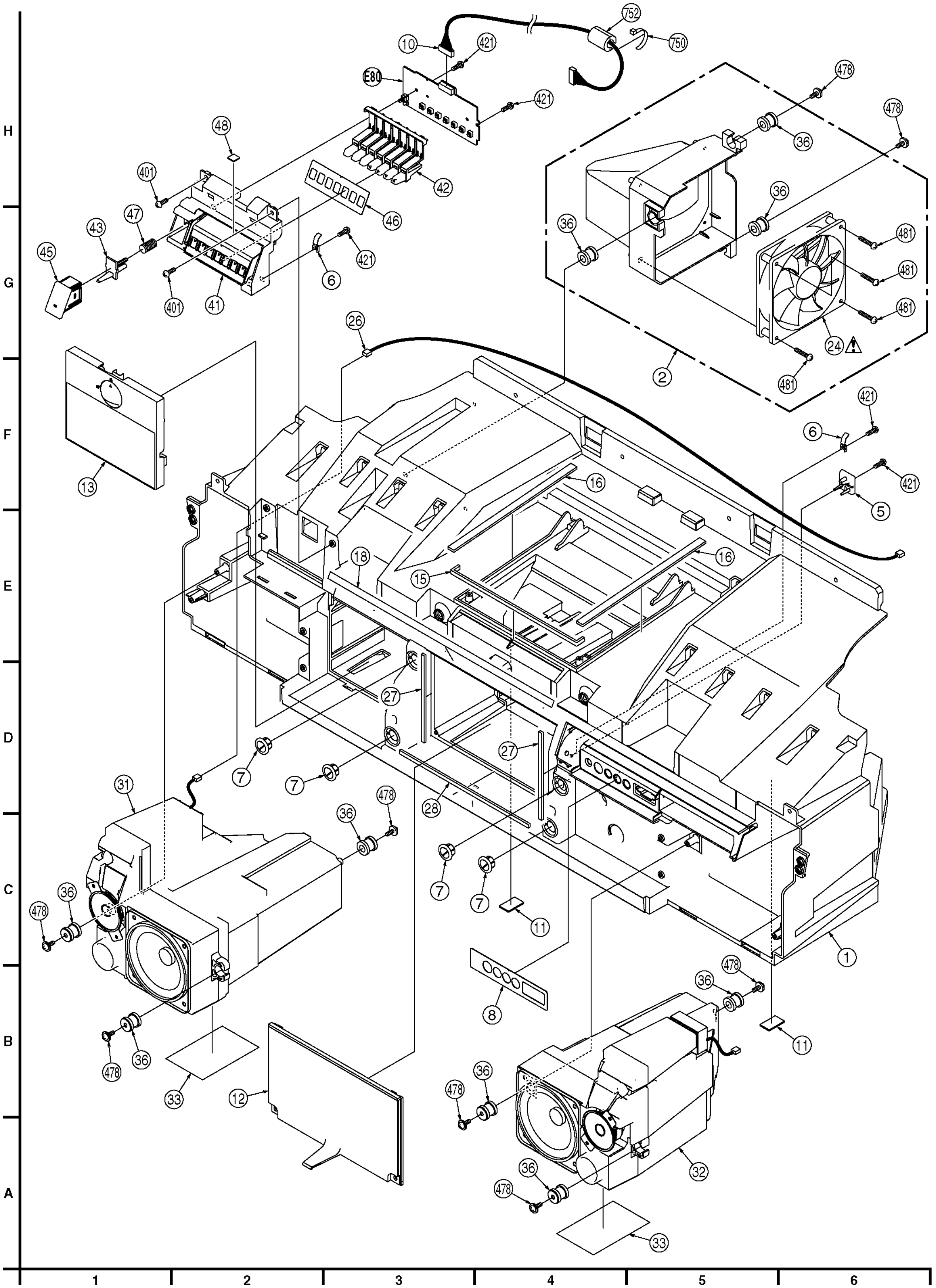
COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PT-44LCX65-K	A
PT-52LCX65-K	B
PT-61LCX65-K	C


H
G
F
E
D
C
B
A
1
2
3
4
5
6
9
23
34
7
454
35
401
29
30
68
451
402
14
E70
480
E100
25
37
38
40
17

14.2. FRONT AND BASE SECTION

❷ FRONT AND BASE SECTION

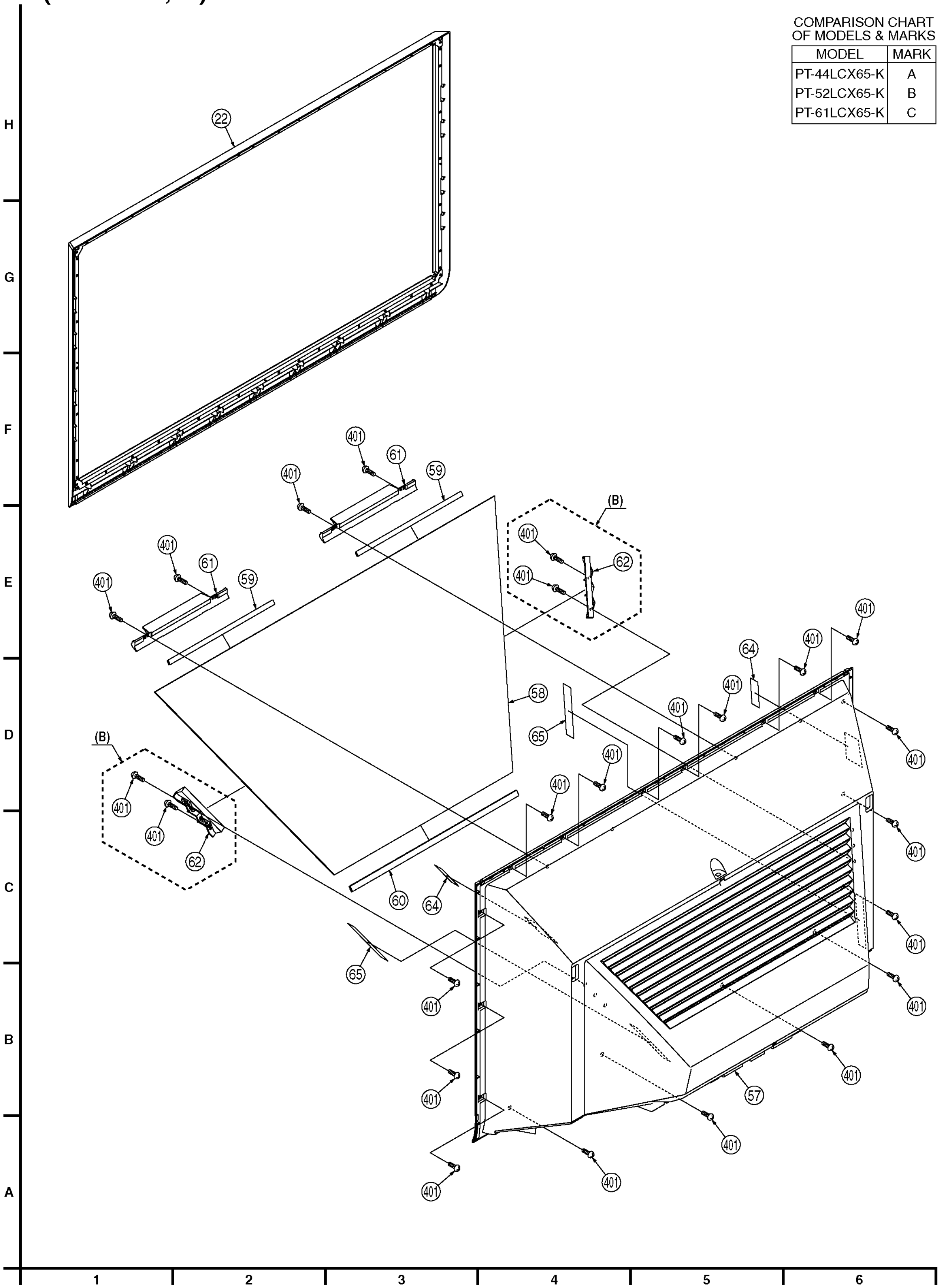

752
10
421
750
E80
421
478
H
48
478
36
401
42
36
46
47
36
43
481
45
421
G
481
6
401
41
481
26
24
2
481
421
F
6
13
421
16
5
E
18
16
15
27
D
27
7
7
31
478
36
28
7
C
7
36
478
11
1
478
36
8
B
11
478
36
36
478
33
12
32
A
36
478
33
1
2
3
4
5
6

14.3. DISPLAY SECTION

❸ 44/52 INCH DISPLAY SECTION (Model: A, B)

COMPARISON CHART OF MODELS & MARKS

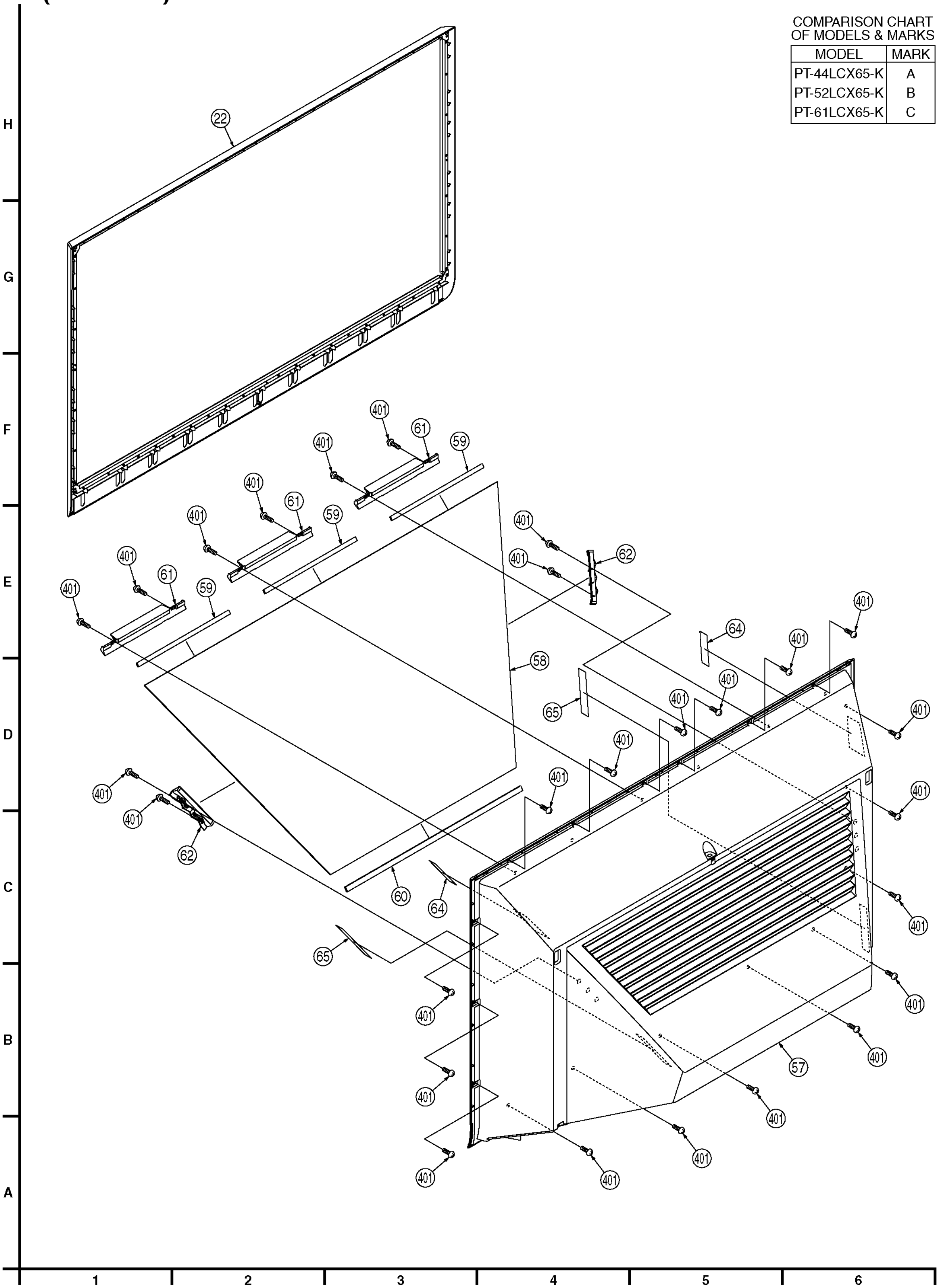
MODEL	MARK
PT-44LCX65-K	A
PT-52LCX65-K	B
PT-61LCX65-K	C


H
G
F
E
D
C
B
A
1
2
3
4
5
6
22
401
61
59
(B)
62
58
64
65
60
57

❸ 61 INCH DISPLAY SECTION (Model: C)

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PT-44LCX65-K	A
PT-52LCX65-K	B
PT-61LCX65-K	C

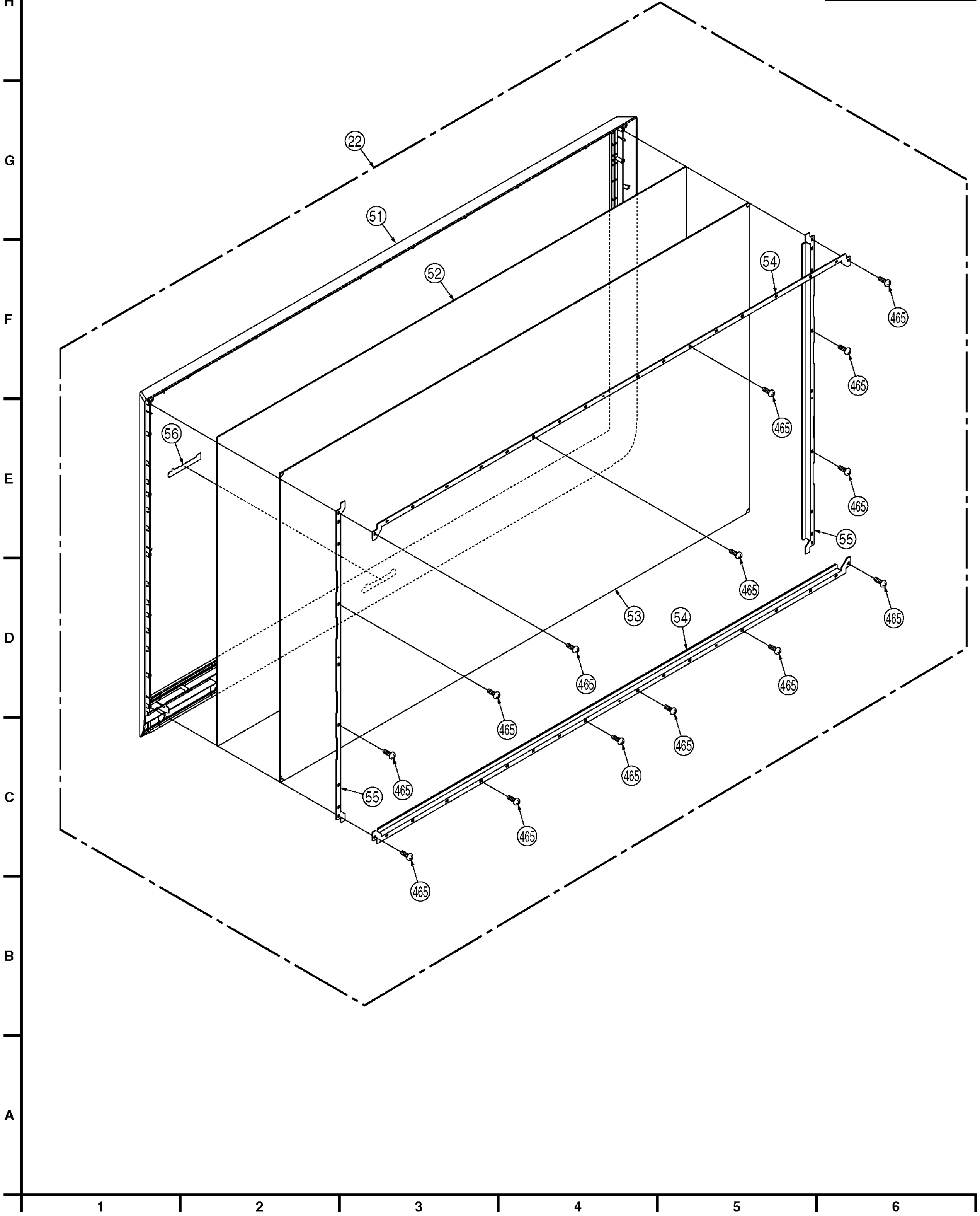

H
G
F
E
D
C
B
A
1
2
3
4
5
6
22
401
61
59
62
58
64
65
60
57

14.4. SCREEN SECTION

④ 44/52 INCH SCREEN SECTION (Model: A, B)

COMPARISON CHART
OF MODELS & MARKS

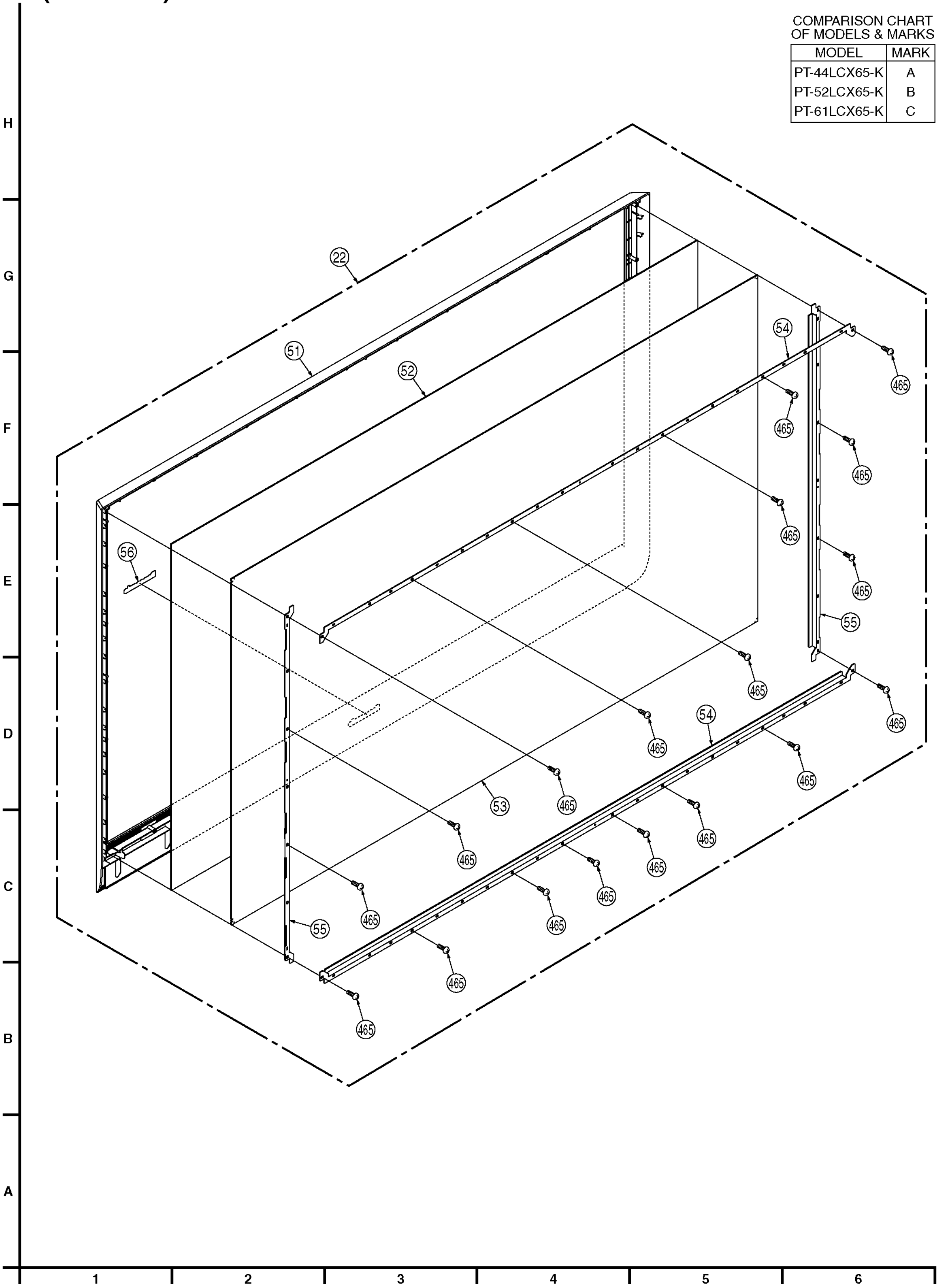
MODEL	MARK
PT-44LCX65-K	A
PT-52LCX65-K	B
PT-61LCX65-K	C


H
G
F
E
D
C
B
A
1
2
3
4
5
6
22
51
52
53
54
55
56
465

❹ 61 INCH SCREEN SECTION
(Model: C)

COMPARISON CHART
OF MODELS & MARKS

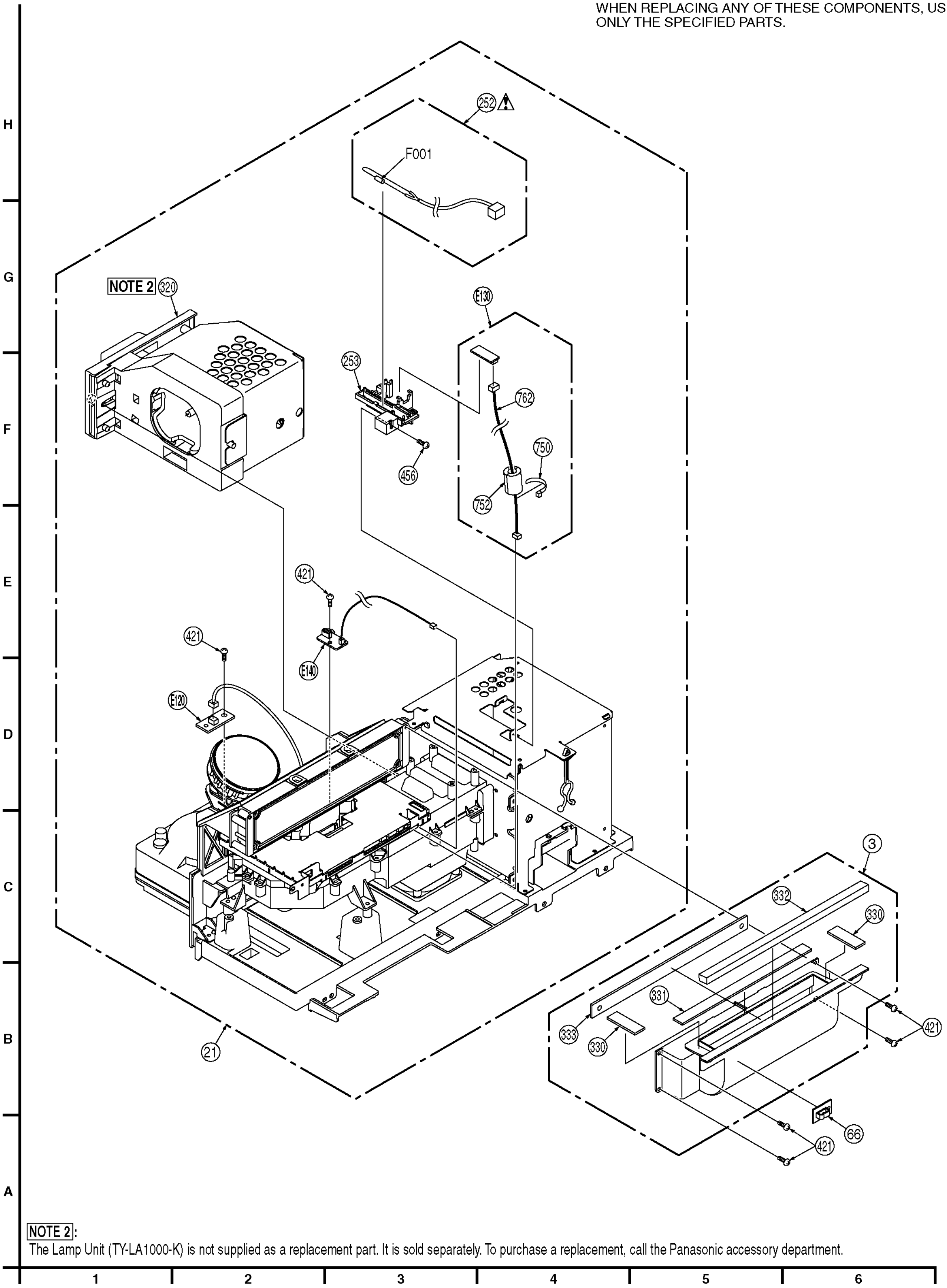
MODEL	MARK
PT-44LCX65-K	A
PT-52LCX65-K	B
PT-61LCX65-K	C


H
G
F
E
D
C
B
A
1
2
3
4
5
6
22
51
52
56
54
465
55
53

14.5. PROJECTION SECTION

❺ PROJECTION SECTION

IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

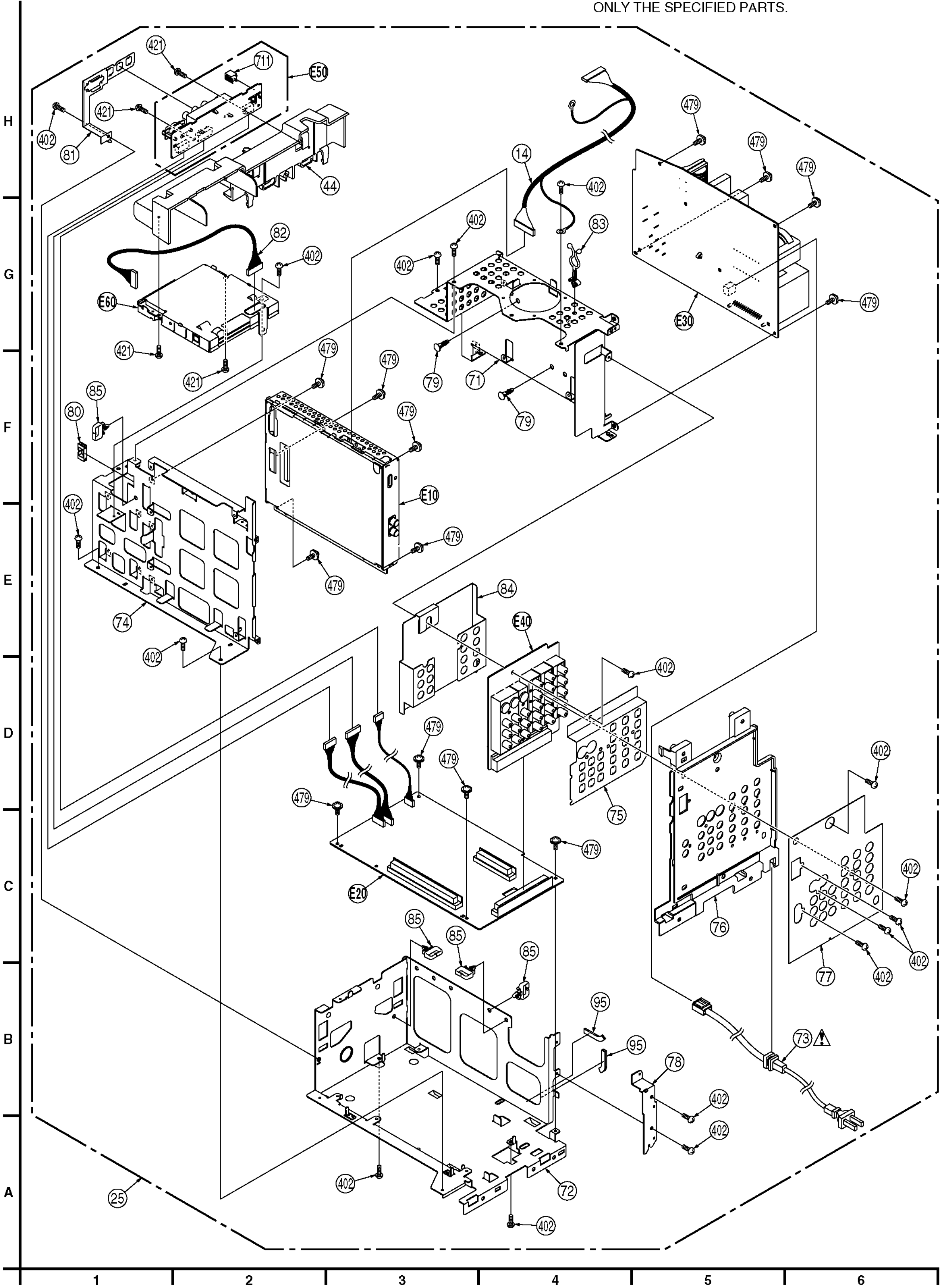

H
G
F
E
D
C
B
A
252 ⚠
F001
NOTE 2 320
E130
253
762
750
456
752
421
E140
421
E120
3
332
330
331
333
330
421
66
421
21
1
2
3
4
5
6

NOTE 2:
The Lamp Unit (TY-LA1000-K) is not supplied as a replacement part. It is sold separately. To purchase a replacement, call the Panasonic accessory department.

14.6. TV UNIT SECTION (1)

❻ TV UNIT SECTION (1)

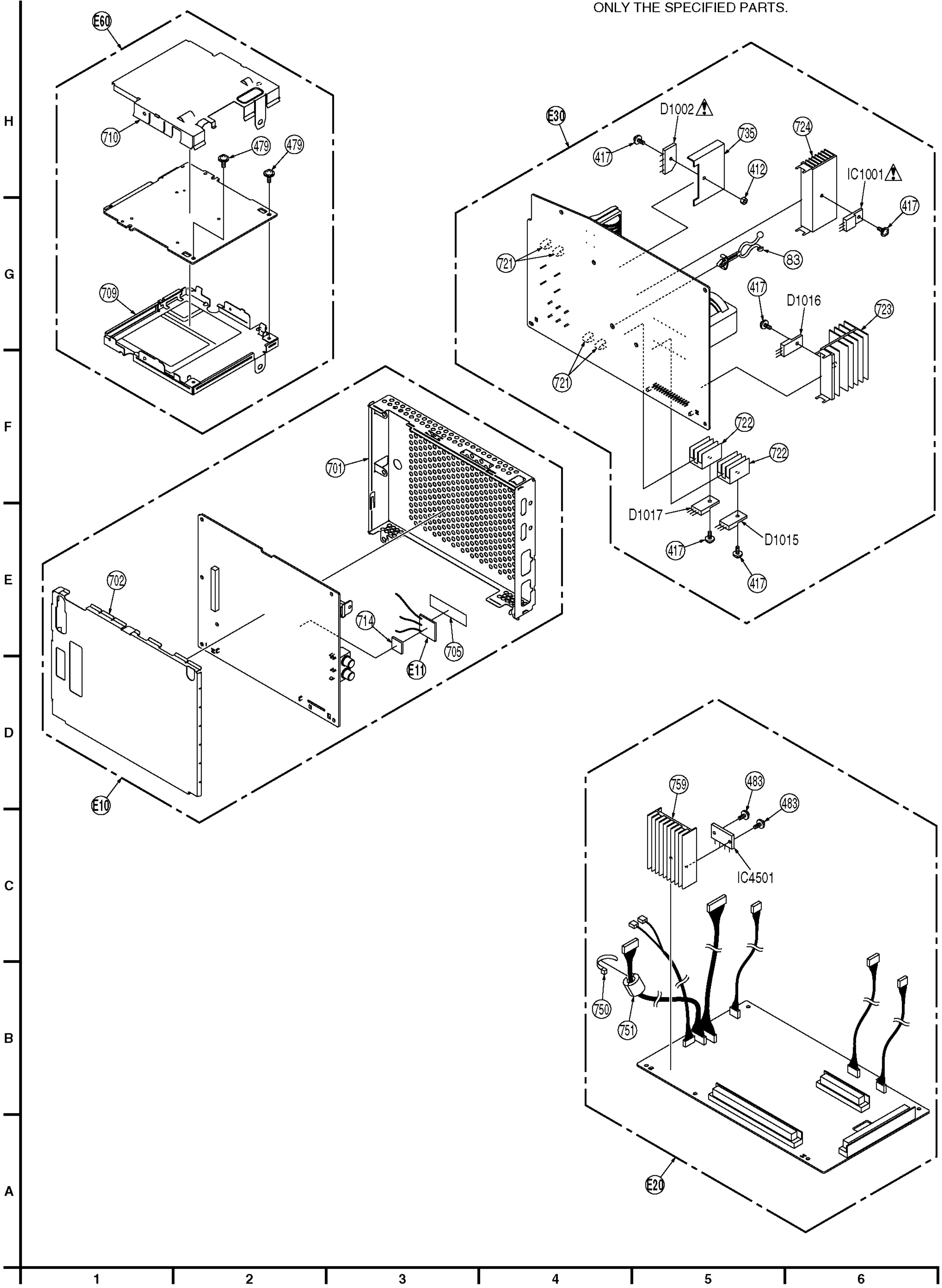
IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.


H
G
F
E
D
C
B
A
1
2
3
4
5
6
421
711
E50
402
421
81
44
14
479
479
479
402
82
402
402
402
83
E60
E30
479
421
421
479
479
79
71
79
85
80
479
E10
402
479
479
84
E40
402
74
402
479
479
479
75
402
479
E20
76
402
402
77
402
402
85
85
85
95
95
73 ⚠
78
402
402
402
72
402
25

14.7. TV UNIT SECTION (2)

❼ TV UNIT SECTION (2)

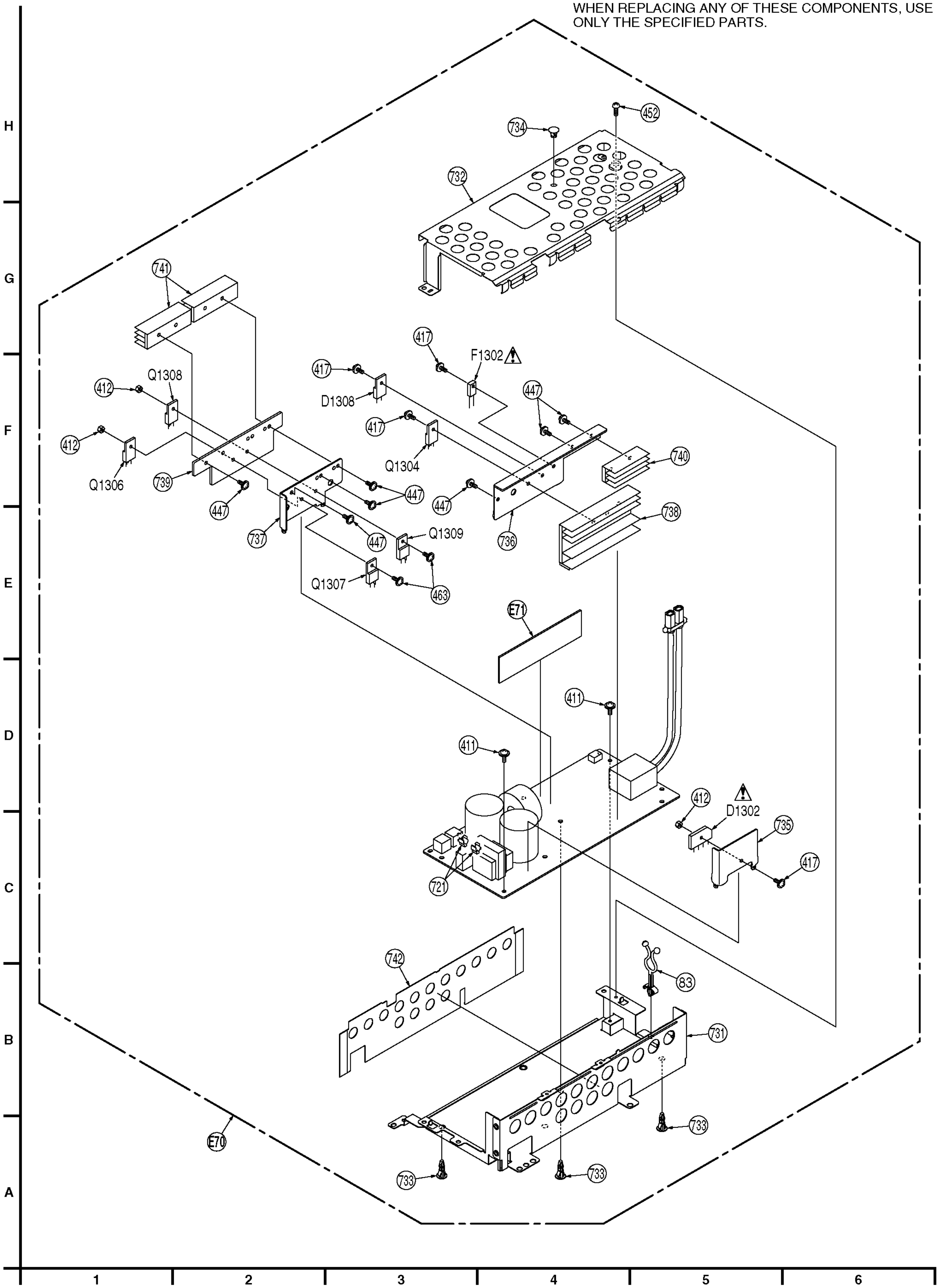
IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.


E60
710
479
479
709
E30
D1002⚠
735
724
417
412
IC1001⚠
417
721
83
417
D1016
723
721
722
722
D1017
D1015
417
417
701
702
714
705
E11
E10
759
483
483
IC4501
750
751
E20
H
G
F
E
D
C
B
A
1
2
3
4
5
6

14.8. BALLAST C.B.A. SECTION

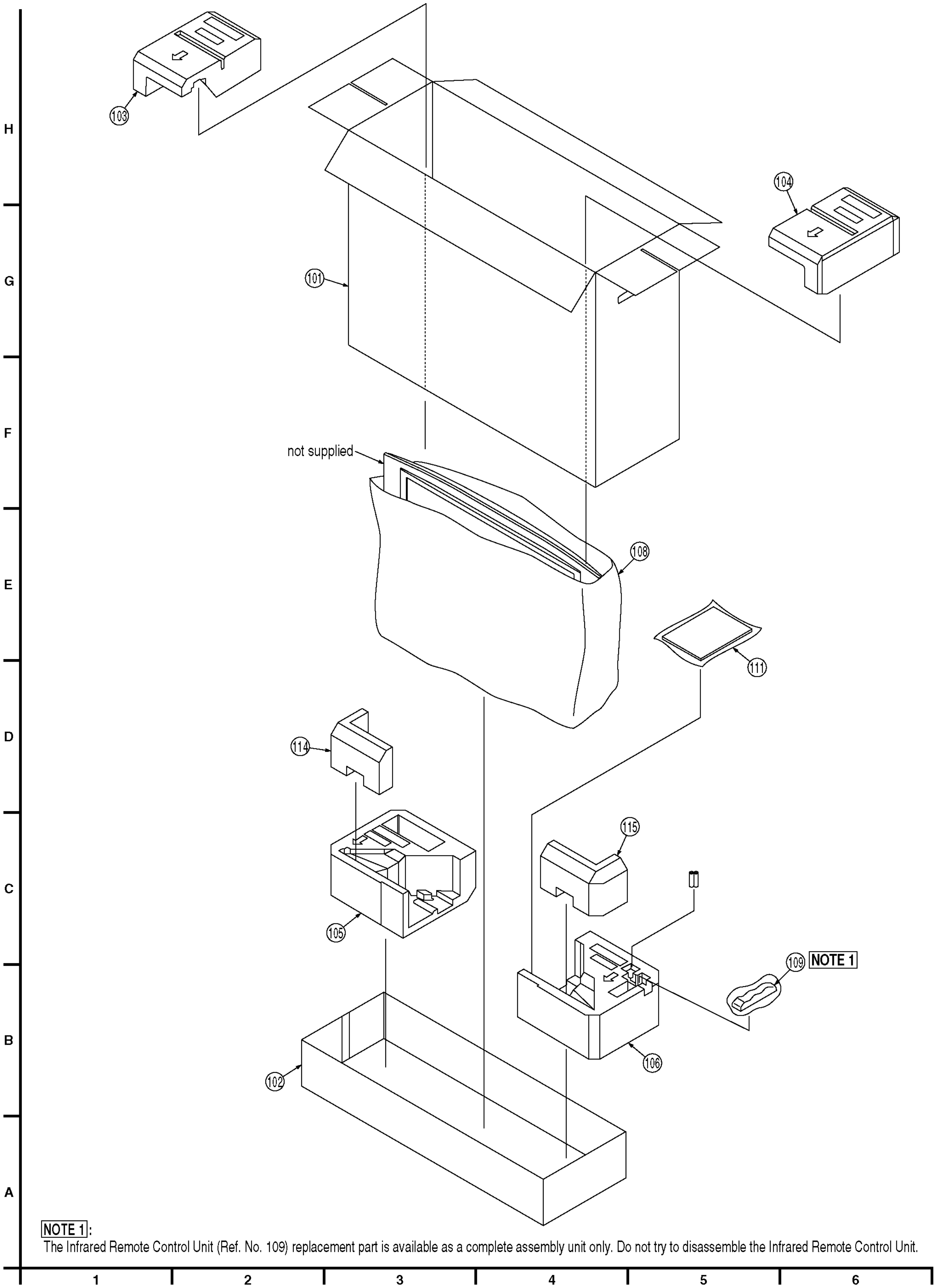
❽ BALLAST C.B.A. SECTION

IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.


H
G
F
E
D
C
B
A
1
2
3
4
5
6
452
734
732
741
417
F1302 ⚠
417
D1308
412
Q1308
447
412
417
Q1304
740
Q1306
739
447
447
447
738
447
737
736
447
Q1309
Q1307
463
E71
411
411
412
⚠
D1302
735
417
721
742
83
731
733
E70
733
733

14.9. PACKING PARTS AND ACCESSORIES SECTION

❾ PACKING PARTS AND ACCESSORIES SECTION


103
104
101
not supplied
108
111
114
115
105
109
NOTE 1
106
102
H
G
F
E
D
C
B
A
1
2
3
4
5
6

NOTE 1:
The Infrared Remote Control Unit (Ref. No. 109) replacement part is available as a complete assembly unit only. Do not try to disassemble the Infrared Remote Control Unit.

15 REPLACEMENT PARTS LIST (CABINET SECTION)

BEFORE REPLACING PARTS, READ THE FOLLOWING:

15.1. REPLACEMENT NOTES

15.1.1. General Notes

1. Use only original replacement parts:

   To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list.
2. **IMPORTANT SAFETY NOTICE**

   Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components, use only the specified parts.
3. SPECIAL NOTE

   All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.
4. Parts with no Ref. No. in "EXPLODED VIEWS" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
5. Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.
6. Definition of Parts supplier:
   a. Parts with mark "PSEC" in the Remarks column are supplied from PSEC.
   b. Parts with mark "PASC-NPC" in the Remarks column are supplied from PASC-NPC.
   c. Parts without mark in the Remarks column are supplied from PSECI.
7. Item numbers with capital letter E (Example: E10, E20,...) in the Ref. No. column are shown in the exploded views.
8. Parts whose Ref. Nos. are the same are interchangeable as replacement parts. Any of these parts may be ordered and used as a replacement part.

15.1.2. Mechanical Replacement Notes

1. Section No. of parts shown in Exploded Views are indicated in the Remarks column.
2. Abbreviation

   RTL: Retention Time Limited

   This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
3. After replacing the Projection Unit (Ref. No. 21) or the Base Body Unit (Ref. No. 40), be sure to perform "ADJUSTMENT of the Projection Unit." Refer to "WHEN REINSTALLING THE PROJECTION UNIT OR BASE BODY UNIT INTO THE UNIT AT THE USER´S LOCATION"; in ADJUSTMENT PROCEDURES 1.
4. The Infrared Remote Control Unit (Ref. No. 109) replacement part is available as a complete assembly unit only. Do not try to disassemble the Infrared Remote Control Unit.

15.1.3. Electrical Replacement Notes

1. Unless otherwise specified;

   All resistors are in Ω, K = 1,000 Ω, M = 1,000 kΩ.
2. Abbreviation

RTL:	Retention Time Limited This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
NR:	Non Repairable Board Ass´y
MGF CHIP:	Metal Glaze Film Chip
C CHIP:	Ceramic Chip
COMPLX CMP:	Complex Component
W FLMPRF:	Wirewound Flameproof
C.B.A.:	Circuit Board Assembly
P.C.B.:	Printed Circuit Board
E.S.D.:	Electrostatically Sensitive Devices

3. When replacing 0 Ω resistor, a wire can be substituted for it.
4. Parts with mark "CSP" in the Remarks column are CSP (Chip Size Package) IC.

WARNING

In case of failure of Digital Tuner, it is required by law to return the defective board to

PANASONIC CANADA INC.
5770 AMBLER DRIVE
MISSISSAUGA ONTARIO
L4W-2T3.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PT-44LCX65-K	A
PT-52LCX65-K	B
PT-61LCX65-K	C

15.2. MECHANICAL REPLACEMENT PARTS LIST

Definition of Parts supplier:

1. **Parts with mark "PSEC" in the Remarks column are supplied from PSEC.**
2. **Parts with mark "PASC-NPC" in the Remarks column are supplied from PASC-NPC.**
3. **Parts without mark in the Remarks column are supplied from PSECI.**

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PT-44LCX65-K	A
PT-52LCX65-K	B
PT-61LCX65-K	C

MECHANICAL REPLACEMENT PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
1	LSKU0029	BASE BODY	2
2	LSXY0811	EXAUST FAN UNIT	2
3	LSXA0683	TOP DUCT 3 UNIT	5 PASC-NPC
5	LSGL0427	INFRARED PIECE	2
6	LSMC0124	PANEL SPRING	2
7	LSKC0008	LATCH	1,2
8	LSGH0055	FRONT JACK SHEET	2
9	LSYF0557	FRONT COVER UNIT (A)	1 PASC-NPC
9	LSYF0553	FRONT COVER UNIT (B)	1 PASC-NPC
9	LSYF0558	FRONT COVER UNIT (C)	1 PASC-NPC
10	LSJA0543	CONNECTOR CABLE W/PLUG	2
11	LSKA0030	RUBBER FOOT	2
12	LSYF0563	OPTICAL COVER UNIT	2
13	LSYK1564	LAMP COVER UNIT	2
14	K1PB20A00021	20-PIN CABLE	1,6
15	LSMG0161	SPACER	2
16	LSMG0162	SPACER	2
17	LSGV0100	REAR COVER (A)	1 PASC-NPC
17	LSYF0569	REAR COVER UNIT (B)	1 PASC-NPC
17	LSYF0571	REAR COVER UNIT (C)	1 PASC-NPC
18	LSMF0408	SHEET	2
21	LSXA0625-HB	PROJECTION UNIT (A)	5 RTL PSEC
21	LSXA0626-HB	PROJECTION UNIT (B)	5 RTL PSEC
21	LSXA0699-HB	PROJECTION UNIT (C)	5 RTL PSEC
22	LSYK1569	SCREEN UNIT (A)	3,4 PASC-NPC
22	LSYK1565	SCREEN UNIT (B)	3,4 PASC-NPC
22	LSYK1570	SCREEN UNIT (C)	3,4 PASC-NPC
23	TMM14414	STRIKE	1 PASC-NPC
24	L6FANEHH0003	FAN3	2 ⚠
25	LSXY0813	TV UNIT	1,6 RTL
26	LSJA0545	CONNECTOR CABLE W/PLUG	2
27	LSMG0154	SPACER	2
28	LSMG0155	SPACER	2
29	LSKF0620	BUTTON DOOR	1 PASC-NPC
30	LSYY0318	FRONT JACK DOOR UNIT	1 PASC-NPC
31	EAB10117AL	SPEAKER ASSEMBLY L	2
32	EAB10117AR	SPEAKER ASSEMBLY R	2
33	LSMF0407	RUBBER SPACER	2
34	LSYF0559	SIDE COVER L UNIT (A)	1 PASC-NPC
34	LSYF0554	SIDE COVER L UNIT (B)	1 PASC-NPC
34	LSYF0560	SIDE COVER L UNIT (C)	1 PASC-NPC
35	LSYF0561	SIDE COVER R UNIT (A)	1 PASC-NPC
35	LSYF0555	SIDE COVER R UNIT (B)	1 PASC-NPC
35	LSYF0562	SIDE COVER R UNIT (C)	1 PASC-NPC
36	TMMJ058	SPEAKER RUBBER	2
37	LSJH0082	DTV JACK HOLDER	1 PASC-NPC
38	LSGH0058	DTV JACK SHEET	1 PASC-NPC
40	LSVE0008	BASE BODY UNIT (A)	1 RTL PASC-NPC
40	LSVE0009	BASE BODY UNIT (B)	1 RTL PASC-NPC
40	LSVE0010	BASE BODY UNIT (C)	1 RTL PASC-NPC
41	LSJF0013	FRONT BUTTON HOLDER	2
42	LSGU0664	OPERATION BUTTON	2
43	LSGL0429	POWER LED PIECE	2
44	LSJH0080	FRONT JACK HOLDER	6
45	LSGU0674	POWER BUTTON	2
46	LSGH0056	OPERATION SHEET	2
47	LSMB0314	POWER BUTTON SPRING	2
48	LSMF0419	SPACER	2
51	LSGY0259	ESCUTCHEON (A)	4 PASC-NPC
51	LSGY0260	ESCUTCHEON (B)	4 PASC-NPC
51	LSGY0261	ESCUTCHEON (C)	4 PASC-NPC
52	LSGP0470	LENTICULAR SCREEN (A)	4 PASC-NPC
52	LSGP0471	LENTICULAR SCREEN (B)	4 PASC-NPC
52	LSGP0472	LENTICULAR SCREEN (C)	4 PASC-NPC
53	LSGP0467	FRESNEL LENS (A)	4 PASC-NPC
53	LSGP0468	FRESNEL LENS (B)	4 PASC-NPC
53	LSGP0469	FRESNEL LENS (C)	4 PASC-NPC
54	LSXA0662	SCREEN ANGLE H UNIT (A)	4 PASC-NPC
54	LSXA0663	SCREEN ANGLE H UNIT (B)	4 PASC-NPC
54	LSXA0664	SCREEN ANGLE H UNIT (C)	4 PASC-NPC
55	LSXA0659	SCREEN ANGLE V UNIT (A)	4 PASC-NPC
55	LSXA0660	SCREEN ANGLE V UNIT (B)	4 PASC-NPC
55	LSXA0661	SCREEN ANGLE V UNIT (C)	4 PASC-NPC
56	TBM0A3005	PANASONIC BADGE	4 PASC-NPC
57	LSGV0097	BACK COVER (A)	3 PASC-NPC
57	LSGV0098	BACK COVER (B)	3 PASC-NPC
57	LSGV0099	BACK COVER (C)	3 PASC-NPC

Ref. No.	Part No.	Part Name & Description	Remarks
58	LSDL0288	MIRROR (A)	3 PASC-NPC
58	LSDL0289	MIRROR (B)	3 PASC-NPC
58	LSDL0290	MIRROR (C)	3 PASC-NPC
59	LSMF0393	SPACER	3 PASC-NPC
60	LSMF0390	SPACER (A)	3 PASC-NPC
60	LSMF0445	SPACER (B)	3 PASC-NPC
60	LSMF0446	SPACER (C)	3 PASC-NPC
61	LSGQ0145	MIRROR HOLDER H	3 PASC-NPC
62	LSYF0556	MIRROR HOLDER V UNIT (B,C)	3 PASC-NPC
64	LSMF0417	SPACER	3 PASC-NPC
65	LSMF0418	SPACER	3 PASC-NPC
66	LSGP0372	CLAMPER	5 PASC-NPC
68	TMM6463-1	CLAMPER	1 PASC-NPC
71	LSMA0807	P.C.B. POWER ANGLE	6
72	LSMA0808	P.C.B. BASE ANGLE	6
73	K2CB2CZ00004	AC CORD W/PLUG	6 ⚠
74	LSMA0809	P.C.B. MAIN ANGLE	6
75	LSSC0773	REAR JACK EARTH PLATE,STEEL	6
76	LSJH0081	REAR JACK HOLDER	6
77	LSGH0057	REAR JACK SHEET	6
78	LSSC0779	EARTH PLATE A	6
79	KGLS-12RTV0	RIVET	6
80	TMME075	EDGE SADDLE	6
81	LSSC0774	FRONT JACK EARTH PLATE,STEEL	6
82	LSJA0544	CONNECTOR CABLE W/PLUG	6
83	TMM5439-1	CLAMPER	6,7,8
84	LSKW0237	REAR JACK BARRIER	6
85	TMM6425-1	CLAMPER	6
95	VMFS0116	SHEET	6
101	LSPG1965	CARTON BOX (A)	9 PASC-NPC
101	LSPG1963	CARTON BOX (B)	9 PASC-NPC
101	LSPG1967	CARTON BOX (C)	9 PASC-NPC
102	LSPG1966	CARTON BOX BOTTOM (A)	9 PASC-NPC
102	LSPG1964	CARTON BOX BOTTOM (B)	9 PASC-NPC
102	LSPG1968	CARTON BOX BOTTOM (C)	9 PASC-NPC
103	LSPN0577	CUSHION TOP-LEFT,STYROFOAM (A)	9 PASC-NPC
103	LSPN0573	CUSHION TOP-LEFT,STYROFOAM (B)	9 PASC-NPC
103	LSPN0581	CUSHION TOP-LEFT,STYROFOAM (C)	9 PASC-NPC
104	LSPN0578	CUSHION TOP-RIGHT,STYROFOAM (A)	9 PASC-NPC
104	LSPN0574	CUSHION TOP-RIGHT,STYROFOAM (B)	9 PASC-NPC
104	LSPN0582	CUSHION TOP-RIGHT,STYROFOAM (C)	9 PASC-NPC
105	LSPN0579	CUSHION BOTTOM-LEFT,STYROFOAM (A)	9 PASC-NPC
105	LSPN0575	CUSHION BOTTOM-LEFT,STYROFOAM (B)	9 PASC-NPC
105	LSPN0583	CUSHION BOTTOM-LEFT,STYROFOAM (C)	9 PASC-NPC
106	LSPN0580	CUSHION BOTTOM-RIGHT,STYROFOAM (A)	9 PASC-NPC
106	LSPN0576	CUSHION BOTTOM-RIGHT,STYROFOAM (B)	9 PASC-NPC
106	LSPN0584	CUSHION BOTTOM-RIGHT,STYROFOAM (C)	9 PASC-NPC

Ref. No.	Part No.	Part Name & Description	Remarks
108	LSPF0161	BAG,POLYETHYLENE (A)	9 PASC-NPC
108	LSPF0111	BAG,POLYETHYLENE (B,C)	9 PASC-NPC
109	EUR7627Z70	INFRARED REMOTE CONTROL UNIT	9 PASC-NPC
111	LSQF0961	FAN BAG	9 PASC-NPC
114	LSPN0588	CUSHION FRONT-LEFT,STYROFOAM	9 PASC-NPC
115	LSPN0589	CUSHION FRONT-RIGHT,STYROFOAM	9 PASC-NPC
252	LSJA0464	THERMAL FUSE UNIT	5 ⚠ PSEC
253	LSMP0420	SENSOR HOLDER	5 PSEC
330	LSMF0269	TOP DUCT 3 SPONGE 1	5 PASC-NPC
331	LSMF0270	TOP DUCT 3 SPONGE 2	5 PASC-NPC
332	LSMF0271	TOP DUCT 3 SPONGE 3	5 PASC-NPC
333	LSMF0272	TOP DUCT 3 SPONGE 4	5 PASC-NPC
401	XTV4+16AFJ	TAPPING SCREW,STEEL	1,2,3
402	XTV3+8JFN	TAPPING SCREW,STEEL	1,6
411	XYE3+FF8FN	SCREW W/WASHER,STEEL	8
412	XNG3BFN	NUT,STEEL	7,8
417	XYN3+K10FN	SCREW W/WASHER,STEEL	7,8
421	XTV3+8GFJ	TAPPING SCREW,STEEL	2,5,6
447	XYN3+K8FN	SCREW W/WASHER,STEEL	8
451	XTW3+8QFJ	TAPPING SCREW,STEEL	1 PASC-NPC
452	XTV3+8FFN	TAPPING SCREW,STEEL	8
454	XTV4+16AFJK	TAPPING SCREW,STEEL	1 PASC-NPC
456	XTV3+6FFJ	TAPPING SCREW,STEEL	5 PSEC
463	XYN3+F12FN	SCREW W/WASHER,STEEL	8
465	XTV4+12AFJ	TAPPING SCREW,STEEL	4 PASC-NPC
478	LSHD0099-FJ	SCREW,STEEL	2
479	XYE3+FJ8FN	SCREW W/WASHER,STEEL	6,7
480	XTW3+8TFJ	TAPPING SCREW,STEEL	1 PASC-NPC
481	XTV3+35GFJ	TAPPING SCREW,STEEL	2
483	XYN3+K10FJ	SCREW W/WASHER,STEEL	7
701	LSSC0771	MAIN SHIELD CASE TOP,STEEL	7
702	LSSC0772	MAIN SHIELD CASE BOTTOM,STEEL	7
705	LSMF0319	SHEET	7
709	LSSC0776	CARD SHIELD CASE BOTTOM,STEEL	7
710	LSSC0775	CARD SHIELD CASE TOP,STEEL	7
711	PNA4618M14VT	INFRARED RECEIVER UNIT	6
714	VMTS0035	CUSHION,RUBBER	7
721	EYF52BCY	FUSE HOLDER	7,8
722	LSSC0724	HEAT SINK	7
723	LSSC0767	HEAT SINK	7
724	LSSC0766	HEAT SINK	7
731	LSSC0777	BALLAST SHIELD CASE BOTTOM,STEEL	8
732	LSSC0778	BALLAST SHIELD CASE TOP,STEEL	8
733	KGLS-10RT	CLAMPER	8
734	KGPS-6RFV0	RIVET	8
735	LSSC0630	HEAT SINK	7,8
736	LSSC0629	HEAT SINK	8
737	LSSC0627	HEAT SINK	8
738	LSSC0631	HEAT SINK	8
739	LSSC0628	HEAT SINK	8
740	LSSC0632	HEAT SINK	8
741	LSSC0633	HEAT SINK	8
742	LSMZ0400	BALLAST BARRIER	8
750	VZFS0006	CLAMPER	2,5,7
751	J0KA00000044	FERITE CORE	7
752	LSLQ0307	FERRITE CORE	2,5
759	LSSC0768	HEAT SINK	7
762	LSJA0533	CONNECTOR CABLE W/PLUG	5 PSEC
E10	LSEB3150A	MAIN C.B.A.	6,7 RTL
E11	LSEP3186A	MAIN CHILD C.B.A.	7 RTL

Ref. No.	Part No.	Part Name & Description	Remarks
E20	LSEP3152A	BASE C.B.A.	6,7 RTL
E30	LSEP3153A	POWER C.B.A.	6,7 RTL
E40	LSEP3154A	REAR JACK C.B.A.	6 RTL
E50	LSEP3155A	FRONT JACK C.B.A.	6 RTL
E60	LSEB3161A	CARD C.B.A.	6,7 RTL
E70	LSEB3163A	BALLAST C.B.A. NR	1,8
E71	LSEP3132B	BALLAST CONTROL C.B.A. NR	8
E80	LSEP3156A	OPERATION C.B.A.	2 RTL
E100	LSXY0888	DIGITAL TUNER C.B.A.	1 RTL PASC-NPC
E120	LSEP3166A	THERMISTOR 1 C.B.A.	5 RTL PSEC
E130	LSEB3137A	THERMISTOR 2 C.B.A.	5 RTL PSEC
E140	LSEP3160A	COVER SWITCH C.B.A.	5 RTL PSEC

15.3. OPTIONAL ACCESSORY REPLACEMENT PARTS LIST

15.3.1. LAMP UNIT

Ref. No.2	Part No.	Part Name & Description	Remarks
320	TY-LA1000-K	LAMP UNIT	5 NOTE

NOTE:

The Lamp Unit (TY-LA1000-K) is not supplied as a replacement part. It is sold separately. To purchase a replacement, call the Panasonic accessory department.

15.4. SERVICE FIXTURES AND TOOLS REPLACEMENT PARTS LIST

Definition of Parts supplier:

1. **All parts are supplied from PSEC.**

SERVICE FIXTURES AND TOOLS

Ref. No.	Part No.	Part Name & Description	Remarks
	LSEP3112A	RELAY P.C.B.	PSEC
	LSUA0042	LCD PANEL FLAT EXTENSION CABLE	PSEC
	LSUA0037	SIGNAL EXTENSION CABLE	PSEC
	LSUA0038	POWER EXTENSION CABLE	PSEC
	LSUA0039	FAN1,3 EXTENSION CABLE	PSEC
	LSUA0040	FAN2 EXTENSION CABLE	PSEC
	LSEP3164A	CONVERTER P.C.B.	PSEC
	LSUA0054	EXTENSION CABLE 8P	PSEC
	LSEP3102A	MONITOR P.C.B.	PSEC
	LSUA0041	COVER SWITCH DEFEAT CABLE	PSEC
	LSUA0003	THERMISTOR 1 DEFEAT CABLE	PSEC
	LSUA0013	THERMISTOR 2 DEFEAT CABLE	PSEC
	LSUA0043	RS232C I/F TOOL	PSEC

15.5. ELECTRICAL REPLACEMENT PARTS LIST

Definition of Parts supplier:

1. **Parts with mark "PSEC" in the Remarks column are supplied from PSEC.**
2. **Parts with mark "PASC-NPC" in the Remarks column are supplied from PASC-NPC.**
3. **Parts without mark in the Remarks column are supplied from PSECI.**

PRINTED CIRCUIT BOARD ASSEMBLY

Ref. No.	Part No.	Part Name & Description	Remarks
E10	LSEB3150A	MAIN C.B.A.	RTL E.S.D.
E11	LSEP3186A	MAIN CHILD C.B.A. *See Schematic Diagram & Circuit Board Layout Notes	RTL
E20	LSEP3152A	BASE C.B.A.	RTL E.S.D.
E30	LSEP3153A	POWER C.B.A.	RTL E.S.D.
E40	LSEP3154A	REAR JACK C.B.A.	RTL
E50	LSEP3155A	FRONT JACK C.B.A.	RTL
E60	LSEB3161A	CARD C.B.A.	RTL
E70	LSEB3163A	BALLAST C.B.A. NR	
E71	LSEP3132B	BALLAST CONTROL C.B.A. NR	
E80	LSEP3156A	OPERATION C.B.A.	RTL
E100	LSXY0888	DIGITAL TUNER C.B.A.	RTL E.S.D. PASC-NPC
E120	LSEP3166A	THERMISTOR 1 C.B.A.	RTL PSEC
E130	LSEB3137A	THERMISTOR 2 C.B.A.	RTL PSEC
E140	LSEP3160A	COVER SWITCH C.B.A.	RTL PSEC

15.5.1. MAIN C.B.A.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC4101	C0JBAR000344	IC, CMOS STANDARD LOGIC	E.S.D.

Ref. No.	Part No.	Part Name & Description	Remarks
IC5001	C0DBFFD00005	IC, LIENAR *See Schematic Diagram & Circuit Board Layout Notes	
IC5002	C0CBCAC00095	IC, LINEAR	
IC5003	C0CBCAD00012	IC, LINEAR	
IC5004	C1AB00002165	IC, LINEAR	
IC5101	C0CBCAC00095	IC, LINEAR	
IC5102	C0CBCAD00012	IC, LINEAR	
IC5103	C1AB00002202	IC, LINEAR	
IC5105	C0JBAR000190	IC, CMOS STANDARD LOGIC	E.S.D.
IC5301	C1AB00002186	IC, LINEAR	CSP
IC5304	C3ABPJ000063	IC, 64M D RAM	E.S.D.
or IC5304	C3ABPJ000065	IC, 64M D RAM	E.S.D.
or IC5304	C3ABPJ000069	IC, 64M D RAM	E.S.D.
IC5305	C0CBAAG00023	IC, LINEAR	
IC5306	C3ABPJ000063	IC, 64M D RAM	E.S.D.
or IC5306	C3ABPJ000065	IC, 64M D RAM	E.S.D.
or IC5306	C3ABPJ000069	IC, 64M D RAM	E.S.D.
IC5502	C0JBAB000619	IC, LOGIC	E.S.D.
IC5505	C0JBAZ002167	IC, LOGIC	E.S.D.
IC5701	C1AB00002192	IC, LINEAR	
IC5705	C0ZBZ0000967	IC, CMOS STANDARD LOGIC	E.S.D.
IC5706	C0CBCBC00062	IC, LINEAR	
IC5801	LSEQ0809	IC, EEP ROM	E.S.D.
IC5803	C0CBCBC00062	IC, LINEAR	
IC5805	C1AB00002191	IC, LINEAR	
IC5807	C0FBBK000038	IC, LINEAR	
IC5808	C0ABBB000256	IC, LINEAR	
IC5809	C0DBFFD00003	IC, LINEAR	
IC6002	C0CBCBD00008	IC, LINEAR	
IC6003	MN102H90MTZ1	IC, 16BIT MICROCONTROLLER	E.S.D.
IC6004	C0EBE0000275	IC, CMOS STANDARD LOGIC	E.S.D.
IC6006	LSEQ0806	IC, 8K EEP ROM	E.S.D.
IC6007	LSEQ0807	IC, 256K EEP ROM	E.S.D.
IC6009	LSEQ0808	IC, FLASH MEMORY	E.S.D.
IC6010	C0ABCA000064	IC, LINEAR	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q5001	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5001	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5002	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5002	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5003	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5003	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5004	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5004	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5005	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q5005	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q5005	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q5006	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q5006	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q5006	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q5007	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q5007	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q5007	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q5008	2SD0601ASL	TRANSISTOR SI NPN CHIP	
Q5009	2SD0601ASL	TRANSISTOR SI NPN CHIP	
Q5010	2SD0601ASL	TRANSISTOR SI NPN CHIP	
Q5101	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5101	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5102	UNR521300L	TRANSISTOR SI NPN CHIP	
or Q5102	B1GBCFNN0009	TRANSISTOR SI NPN CHIP	
or Q5102	B1GBCFNN0031	TRANSISTOR SI NPN CHIP	
Q5103	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5103	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5104	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5104	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5105	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5105	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5106	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5106	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5107	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5107	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5108	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q5108	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q5108	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q5109	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q5109	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q5109	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q5110	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q5110	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q5110	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q5111	2SD0601ASL	TRANSISTOR SI NPN CHIP	
Q5112	2SD0601ASL	TRANSISTOR SI NPN CHIP	
Q5113	2SD0601ASL	TRANSISTOR SI NPN CHIP	
Q5301	2SB1218AHL	TRANSISTOR SI PNP CHIP	
or Q5301	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q5302	2SB1218AHL	TRANSISTOR SI PNP CHIP	
or Q5302	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q5509	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5509	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5518	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5518	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5519	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q5519	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q5519	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q5520	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5520	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5801	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5801	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5802	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5802	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5803	UNR521300L	TRANSISTOR SI NPN CHIP	
or Q5803	B1GBCFNN0009	TRANSISTOR SI NPN CHIP	
or Q5803	B1GBCFNN0031	TRANSISTOR SI NPN CHIP	
Q5812	2SK137400L	TRANSISTOR FET CHIP	
Q5814	2SK137400L	TRANSISTOR FET CHIP	
Q5816	2SK137400L	TRANSISTOR FET CHIP	
Q5817	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5817	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5818	2SB0709AHL	TRANSISTOR SI PNP CHIP	
or Q5818	B1ADCC000004	TRANSISTOR SI PNP CHIP	

Ref. No.	Part No.	Part Name & Description	Remarks
or Q5818	B1ADCF000001	TRANSISTOR SI PNP CHIP	
or Q5818	B1ADCF000077	TRANSISTOR SI PNP CHIP	
Q5819	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5819	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5821	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5821	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5822	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5822	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q5823	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q5823	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q6001	2SB1218AHL	TRANSISTOR SI PNP CHIP	
or Q6001	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q6002	2SB1218AHL	TRANSISTOR SI PNP CHIP	
or Q6002	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q6003	UNR521300L	TRANSISTOR SI NPN CHIP	
or Q6003	B1GBCFNN0009	TRANSISTOR SI NPN CHIP	
or Q6003	B1GBCFNN0031	TRANSISTOR SI NPN CHIP	
Q6004	UNR521300L	TRANSISTOR SI NPN CHIP	
or Q6004	B1GBCFNN0009	TRANSISTOR SI NPN CHIP	
or Q6004	B1GBCFNN0031	TRANSISTOR SI NPN CHIP	
Q6007	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q6007	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q6008	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q6008	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q6009	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q6009	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q6010	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q6010	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q6011	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q6011	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q6012	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q6012	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q6013	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q6013	B1ABCF000020	TRANSISTOR SI NPN CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D5502	MA2S37200K8	DIODE SI CHIP	
D5801	MAZT068H0L	DIODE ZENER CHIP 6.8V	
D5802	MA2J111008	DIODE SI CHIP	
or D5802	B0ACCK000005	DIODE SI CHIP	
or D5802	MA2J11100L	DIODE SI CHIP	
D5804	EZJZ0V80008B	VARISTOR 80V	
D5805	EZJZ0V80008B	VARISTOR 80V	
D5806	EZJZ0V80008B	VARISTOR 80V	
D5807	EZJZ0V80008B	VARISTOR 80V	
D5808	EZJZ0V80008B	VARISTOR 80V	
D5809	EZJZ0V80008B	VARISTOR 80V	
D5810	EZJZ0V80008B	VARISTOR 80V	
D5811	EZJZ0V80008B	VARISTOR 80V	
D6004	MA3J142E0L	DIODE SI CHIP	
or D6004	B0ADCJ000012	DIODE SI CHIP	
D6005	MA3J142D0L	DIODE SI CHIP	
or D6005	B0ADCJ000025	DIODE SI CHIP	
D6006	MA2J111008	DIODE SI CHIP	
or D6006	B0ACCK000005	DIODE SI CHIP	
or D6006	MA2J11100L	DIODE SI CHIP	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R3401	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R3402	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R3403	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R3404	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R4102	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R4103	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R4105	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4106	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4107	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4108	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4109	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4110	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4111	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4112	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4113	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4114	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R5001	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R5002	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R5003	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R5004	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R5005	ERA3YED471V	MGF CHIP 1/16W 470	
R5006	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5007	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R5008	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	
R5009	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R5010	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R5011	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5012	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5013	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5014	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R5015	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R5016	ERJ3EKF5100V	MGF CHIP 1/16W 5.1K	
R5017	ERJ3EKF5100V	MGF CHIP 1/16W 5.1K	
R5018	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5019	ERA3YED271V	MGF CHIP 1/16W 270	
R5020	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5021	ERA3YED122V	MGF CHIP 1/16W 1.2K	
R5022	ERJ3EKF3901V	MGF CHIP 1/16W 3.9K	
R5023	ERJ3EKF3901V	MGF CHIP 1/16W 3.9K	
R5024	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5025	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5026	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R5027	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R5028	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R5029	ERJ3GEYJ390V	MGF CHIP 1/16W 39	
R5030	ERJ3EKF1401V	MGF CHIP 1/16W 1.4K	
R5031	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5032	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	
R5033	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5034	ERJ3EKF1401V	MGF CHIP 1/16W 1.4K	
R5035	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5036	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	
R5037	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R5038	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5039	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R5040	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R5041	ERA3YHD330V	MGF CHIP 1/16W 33	
R5042	ERA3YED151V	MGF CHIP 1/16W 150	
R5043	ERA3YHD330V	MGF CHIP 1/16W 33	
R5044	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R5045	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5046	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5047	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5048	ERA3YHD330V	MGF CHIP 1/16W 33	
R5049	ERA3YED151V	MGF CHIP 1/16W 150	

Ref. No.	Part No.	Part Name & Description	Remarks
R5050	ERA3YHD330V	MGF CHIP 1/16W 33	
R5051	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R5052	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5053	EXBV8V470JV	ARRAY CHIP 47	
R5054	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5055	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5056	ERA3YHD330V	MGF CHIP 1/16W 33	
R5057	ERA3YED151V	MGF CHIP 1/16W 150	
R5058	ERA3YHD330V	MGF CHIP 1/16W 33	
R5059	EXBV8V470JV	ARRAY CHIP 47	
R5060	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5061	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5062	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5063	EXBV8V470JV	ARRAY CHIP 47	
R5064	EXBV8V470JV	ARRAY CHIP 47	
R5065	EXBV8V470JV	ARRAY CHIP 47	
R5066	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5067	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5068	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5069	ERJ3GEYJ390V	MGF CHIP 1/16W 39	
R5070	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5071	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5072	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5073	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5074	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5075	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5076	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5082	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5083	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5101	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R5102	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R5103	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R5104	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5105	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R5106	ERA3YED331V	MGF CHIP 1/16W 330	
R5107	ERJ3EKF7500V	MGF CHIP 1/16W 750	
R5108	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5109	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5110	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5111	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5112	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5113	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5114	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5115	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R5116	ERJ3GEYJ331V	MGF CHIP 1/16W 330	
R5117	ERA3YED221V	MGF CHIP 1/16W 220	
R5118	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5119	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5120	EXBV8V470JV	ARRAY CHIP 47	
R5121	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R5122	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R5123	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5124	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R5125	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R5126	ERJ3EKF5100V	MGF CHIP 1/16W 5.1K	
R5127	ERJ3EKF5100V	MGF CHIP 1/16W 5.1K	
R5128	ERJ3EKF1401V	MGF CHIP 1/16W 1.4K	
R5129	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5130	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5131	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5132	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	
R5133	EXBV8V470JV	ARRAY CHIP 47	
R5134	ERJ3EKF2001V	MGF CHIP 1/16W 2K	
R5135	ERJ3EKF3901V	MGF CHIP 1/16W 3.9K	
R5136	ERJ3EKF3901V	MGF CHIP 1/16W 3.9K	
R5137	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R5138	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5139	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R5140	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R5141	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R5142	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R5143	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R5144	EXBV8V470JV	ARRAY CHIP 47	
R5145	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R5146	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5147	ERA3YHD330V	MGF CHIP 1/16W 33	
R5148	ERA3YED151V	MGF CHIP 1/16W 150	
R5149	ERA3YHD330V	MGF CHIP 1/16W 33	
R5150	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5151	EXBV8V470JV	ARRAY CHIP 47	
R5152	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5153	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R5154	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5155	ERA3YHD330V	MGF CHIP 1/16W 33	
R5156	ERA3YED151V	MGF CHIP 1/16W 150	
R5157	ERA3YHD330V	MGF CHIP 1/16W 33	
R5158	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5159	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5160	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5161	ERA3YHD330V	MGF CHIP 1/16W 33	
R5162	ERA3YED151V	MGF CHIP 1/16W 150	
R5163	ERA3YHD330V	MGF CHIP 1/16W 33	
R5164	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R5165	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5166	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5167	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5168	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5169	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5170	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R5304	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5305	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5306	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5307	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R5308	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R5309	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R5310	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5311	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5312	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5313	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5314	ERJ3GEYJ112V	MGF CHIP 1/16W 1.1K	
R5315	ERJ3GEYJ112V	MGF CHIP 1/16W 1.1K	
R5316	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5317	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5323	EXBV8V220JV	ARRAY CHIP 22	
R5324	EXBV8V220JV	ARRAY CHIP 22	
R5325	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5330	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5331	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5333	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5334	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5335	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5336	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5337	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5338	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5339	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5340	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5341	EXBV8V220JV	ARRAY CHIP 22	
R5342	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5343	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5344	ERJ3GEYJ680V	MGF CHIP 1/16W 68	
R5345	EXBV8V470JV	ARRAY CHIP 47	
R5346	EXBV8V470JV	ARRAY CHIP 47	
R5347	EXBV8V470JV	ARRAY CHIP 47	
R5348	EXBV8V470JV	ARRAY CHIP 47	
R5349	EXBV8V470JV	ARRAY CHIP 47	
R5350	EXBV8V470JV	ARRAY CHIP 47	
R5351	EXBV8V470JV	ARRAY CHIP 47	
R5352	EXBV8V470JV	ARRAY CHIP 47	
R5353	ERJ3GEYJ331V	MGF CHIP 1/16W 330	
R5354	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5355	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R5356	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R5357	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R5358	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R5359	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5360	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	

Ref. No.	Part No.	Part Name & Description	Remarks
R5361	ERJ3GEYJ112V	MGF CHIP 1/16W 1.1K	
R5362	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R5363	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R5364	EXBV8V220JV	ARRAY CHIP 22	
R5365	EXBV8V220JV	ARRAY CHIP 22	
R5366	EXBV8V220JV	ARRAY CHIP 22	
R5367	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5368	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5369	EXBV8V470JV	ARRAY CHIP 47	
R5370	EXBV8V470JV	ARRAY CHIP 47	
R5371	EXBV8V470JV	ARRAY CHIP 47	
R5372	EXBV8V470JV	ARRAY CHIP 47	
R5373	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5374	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5375	EXBV8V470JV	ARRAY CHIP 47	
R5376	EXBV8V470JV	ARRAY CHIP 47	
R5377	EXBV8V470JV	ARRAY CHIP 47	
R5378	EXBV8V470JV	ARRAY CHIP 47	
R5379	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5380	EXBV8V470JV	ARRAY CHIP 47	
R5381	EXBV8V470JV	ARRAY CHIP 47	
R5382	EXBV8V470JV	ARRAY CHIP 47	
R5383	EXBV8V470JV	ARRAY CHIP 47	
R5384	ERJ3GEYJ680V	MGF CHIP 1/16W 68	
R5385	ERJ3GEYJ331V	MGF CHIP 1/16W 330	
R5388	EXBV8V470JV	ARRAY CHIP 47	
R5389	EXBV8V470JV	ARRAY CHIP 47	
R5390	EXBV8V470JV	ARRAY CHIP 47	
R5391	EXBV8V470JV	ARRAY CHIP 47	
R5392	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5393	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5394	EXBV8V470JV	ARRAY CHIP 47	
R5395	EXBV8V470JV	ARRAY CHIP 47	
R5396	EXBV8V470JV	ARRAY CHIP 47	
R5397	EXBV8V470JV	ARRAY CHIP 47	
R5398	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5399	EXBV8V470JV	ARRAY CHIP 47	
R5400	EXBV8V470JV	ARRAY CHIP 47	
R5401	EXBV8V470JV	ARRAY CHIP 47	
R5402	EXBV8V470JV	ARRAY CHIP 47	
R5403	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5404	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5405	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5406	EXBV8V470JV	ARRAY CHIP 47	
R5407	EXBV8V470JV	ARRAY CHIP 47	
R5408	EXBV8V470JV	ARRAY CHIP 47	
R5409	EXBV8V470JV	ARRAY CHIP 47	
R5508	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5509	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R5510	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R5511	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R5512	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R5519	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5529	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R5530	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R5532	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5548	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5549	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5550	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R5551	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R5552	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5553	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R5554	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5555	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5590	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5701	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5702	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5703	EXBV8V470JV	ARRAY CHIP 47	
R5704	EXBV8V470JV	ARRAY CHIP 47	
R5705	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R5706	ERJ3GEYJ680V	MGF CHIP 1/16W 68	
R5707	EXBV8V470JV	ARRAY CHIP 47	
R5708	EXBV8V470JV	ARRAY CHIP 47	

Ref. No.	Part No.	Part Name & Description	Remarks
R5709	EXBV8V470JV	ARRAY CHIP 47	
R5710	EXBV8V470JV	ARRAY CHIP 47	
R5750	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5756	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5757	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5759	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R5760	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5767	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5768	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5769	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5770	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5771	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5772	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5773	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5774	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5775	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5776	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5779	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5780	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R5781	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R5802	ERJ3GEYJ390V	MGF CHIP 1/16W 39	
R5803	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5804	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5805	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5806	ERJ2GEJ2R7X	MGF CHIP 1/16W 2.7	
R5807	ERJ2GEJ2R7X	MGF CHIP 1/16W 2.7	
R5808	ERJ2GEJ2R7X	MGF CHIP 1/16W 2.7	
R5809	ERJ2GEJ2R7X	MGF CHIP 1/16W 2.7	
R5810	ERJ2GEJ2R7X	MGF CHIP 1/16W 2.7	
R5811	ERJ2GEJ2R7X	MGF CHIP 1/16W 2.7	
R5812	ERJ2GEJ2R7X	MGF CHIP 1/16W 2.7	
R5813	ERJ2GEJ2R7X	MGF CHIP 1/16W 2.7	
R5814	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R5815	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5816	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5817	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R5818	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R5819	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R5820	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R5821	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R5822	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R5854	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5855	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R5857	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R5858	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R5859	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R5861	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R5862	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R5864	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5865	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5866	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5867	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5883	EXBV8V220JV	ARRAY CHIP 22	
R5884	EXBV8V220JV	ARRAY CHIP 22	
R5885	EXBV8V220JV	ARRAY CHIP 22	
R5886	EXBV8V220JV	ARRAY CHIP 22	
R5892	ERJ3GEYJ105V	MGF CHIP 1/16W 1M	
R5898	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5901	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5902	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5903	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5904	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5905	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5907	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5908	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5909	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5912	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5913	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R5914	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R5915	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5916	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R5917	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5918	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	

Ref. No.	Part No.	Part Name & Description	Remarks
R5919	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5920	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5921	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5922	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R5923	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5924	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5925	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R5926	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R5927	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5928	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5929	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R5930	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R5940	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R5943	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5944	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5946	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5947	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5948	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5949	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5950	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5951	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R5952	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R5953	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R5954	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R5955	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R5956	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5957	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5958	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5960	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5961	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5963	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5964	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R5965	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R5966	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R5967	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R5968	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R5969	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R6001	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6002	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6003	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6004	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6005	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6006	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6007	D1H84734A008	ARRAY CHIP 47K	
R6008	D1H84734A008	ARRAY CHIP 47K	
R6009	D1H84734A008	ARRAY CHIP 47K	
R6010	D1H84734A008	ARRAY CHIP 47K	
R6011	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6012	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6013	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6014	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6015	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6016	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6017	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R6018	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R6019	ERJ3GEYJ271V	MGF CHIP 1/16W 270	
R6020	ERJ3GEYJ271V	MGF CHIP 1/16W 270	
R6021	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R6022	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R6023	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6024	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6025	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R6026	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R6027	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R6028	EXBV8V470JV	ARRAY CHIP 47	
R6029	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6030	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6031	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R6032	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R6033	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6034	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6035	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6036	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6037	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6038	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6039	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6040	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6041	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6042	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6043	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6044	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6045	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6046	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6047	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R6048	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6049	ERJ3EKF3901V	MGF CHIP 1/16W 3.9K	
R6050	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R6051	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6052	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6053	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6054	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6055	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6056	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6057	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6058	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6059	EXBV8V470JV	ARRAY CHIP 47	
R6060	EXBV8V470JV	ARRAY CHIP 47	
R6061	EXBV8V470JV	ARRAY CHIP 47	
R6062	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6063	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6064	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6065	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6066	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6067	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6068	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6069	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R6070	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6071	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6072	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6073	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6074	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R6075	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R6076	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6077	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R6078	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R6079	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6080	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6081	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6082	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6083	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6084	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R6085	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R6086	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6087	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6088	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R6089	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R6090	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6091	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6092	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6093	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6094	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6095	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R6096	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6097	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6098	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6099	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6100	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6101	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6102	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6103	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6104	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6105	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6106	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6107	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6108	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6109	ERJ3GEYJ101V	MGF CHIP 1/16W 100	

Ref. No.	Part No.	Part Name & Description	Remarks
R6110	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6111	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6112	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6113	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6114	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6115	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6116	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6117	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6118	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6119	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6120	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6121	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6122	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6123	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6124	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6125	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R6126	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R6127	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R6128	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R6129	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R6130	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6131	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R6132	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R6133	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6134	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6135	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6136	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R6137	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R6138	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R6139	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R6140	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R6141	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R6157	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6158	EXBV8V121JV	ARRAY CHIP 120	
R6159	EXBV8V121JV	ARRAY CHIP 120	
R6160	EXBV8V121JV	ARRAY CHIP 120	
R6161	EXBV8V121JV	ARRAY CHIP 120	
R6162	EXBV8V121JV	ARRAY CHIP 120	
R6163	EXBV8V121JV	ARRAY CHIP 120	
R6164	EXBV8V121JV	ARRAY CHIP 120	
R6165	EXBV8V121JV	ARRAY CHIP 120	
R6166	EXBV8V121JV	ARRAY CHIP 120	
R6167	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6168	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6169	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6170	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6171	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6172	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R6173	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R6174	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6175	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6176	ERJ3EKF3901V	MGF CHIP 1/16W 3.9K	
R6177	ERJ3EKF6801V	MGF CHIP 1/16W 6.8K	
R6178	ERJ3EKF6800V	MGF CHIP 1/16W 680	
R6179	ERJ3EKF6800V	MGF CHIP 1/16W 680	
R6180	ERJ3EKF6800V	MGF CHIP 1/16W 680	
R6181	ERJ3EKF6800V	MGF CHIP 1/16W 680	
R6183	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6184	ERJ3EKF2002V	MGF CHIP 1/16W 20K	
R6185	ERJ3EKF2002V	MGF CHIP 1/16W 20K	
R6186	ERJ3EKF1002V	MGF CHIP 1/16W 10K	
R6187	ERJ3EKF1002V	MGF CHIP 1/16W 10K	
R6188	ERJ3EKF1002V	MGF CHIP 1/16W 10K	
R6189	ERJ3EKF1002V	MGF CHIP 1/16W 10K	
R6190	ERJ3EKF2002V	MGF CHIP 1/16W 20K	
R6191	ERJ3EKF2002V	MGF CHIP 1/16W 20K	
R6192	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6193	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6200	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6201	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R6202	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C3401	F1H1H101A230	C CHIP 50V 100PF	
C3402	F1H1H101A230	C CHIP 50V 100PF	
C3403	F1H1C104A008	C CHIP 16V 0.1UF	
C3404	F1H1H101A230	C CHIP 50V 100PF	
C3405	F1H1H101A230	C CHIP 50V 100PF	
C3406	F1H1C104A008	C CHIP 16V 0.1UF	
C3407	F1H1C104A008	C CHIP 16V 0.1UF	
C3408	F1H1C104A008	C CHIP 16V 0.1UF	
C3409	F1H1C104A008	C CHIP 16V 0.1UF	
C3410	F1H1H101A230	C CHIP 50V 100PF	
C3416	F1H1H103A219	C CHIP 50V 0.01UF	
C3417	F1H1C104A008	C CHIP 16V 0.1UF	
C3418	F1H1C104A008	C CHIP 16V 0.1UF	
C3419	F1H1C104A008	C CHIP 16V 0.1UF	
C3420	F1H1C104A008	C CHIP 16V 0.1UF	
C3421	F1H1C104A008	C CHIP 16V 0.1UF	
C3422	F1H1C104A008	C CHIP 16V 0.1UF	
C3423	F1H1C104A008	C CHIP 16V 0.1UF	
C3437	F1H1C104A008	C CHIP 16V 0.1UF	
C3438	F1H1C104A008	C CHIP 16V 0.1UF	
C3439	F1H1H101A230	C CHIP 50V 100PF	
C3440	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
C3441	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
C4105	F1H1C104A008	C CHIP 16V 0.1UF	
C4107	F1J1A1050004	C CHIP 10V 1UF	
C4108	EEE1CA220SR	ELECTROLYTIC 16V 22UF	
C4109	F1J1A1050004	C CHIP 10V 1UF	
C4111	F1H1C104A008	C CHIP 16V 0.1UF	
C4112	F1J1A1050004	C CHIP 10V 1UF	
C4113	F1J1A1050004	C CHIP 10V 1UF	
C4114	F1J1A1050004	C CHIP 10V 1UF	
C4115	F1J1A1050004	C CHIP 10V 1UF	
C5002	F1H1A105A019	C CHIP 10V 1UF	
C5004	F1H1E103A029	C CHIP 25V 0.01UF	
C5005	F1J1A1050004	C CHIP 10V 1UF	
C5007	F1H1H101A230	C CHIP 50V 100PF	
C5008	F1H1E103A029	C CHIP 25V 0.01UF	
C5010	F1H1H330A230	C CHIP 50V 33PF	
C5011	F1H1H330A230	C CHIP 50V 33PF	
C5012	F1H1C104A008	C CHIP 16V 0.1UF	
C5013	F1J1A1050004	C CHIP 10V 1UF	
C5014	F1J1A1050004	C CHIP 10V 1UF	
C5015	F1H1C104A008	C CHIP 16V 0.1UF	
C5016	F1J1A1050004	C CHIP 10V 1UF	
C5017	F1J1A1050004	C CHIP 10V 1UF	
C5018	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5020	F1H1C104A008	C CHIP 16V 0.1UF	
C5021	F1H1C104A008	C CHIP 16V 0.1UF	
C5022	F1H1C104A008	C CHIP 16V 0.1UF	
C5023	F1H1C104A008	C CHIP 16V 0.1UF	
C5024	F1H1C104A008	C CHIP 16V 0.1UF	
C5025	F1H1H150A230	C CHIP 50V 15PF	
C5026	F1H1H680A736	C CHIP 50V 68PF	
C5027	F1H1H680A736	C CHIP 50V 68PF	
C5028	F1H1H150A230	C CHIP 50V 15PF	
C5029	F1H1H220A230	C CHIP 50V 22PF	
C5030	F1H1H220A230	C CHIP 50V 22PF	
C5031	F1H1C104A008	C CHIP 16V 0.1UF	
C5032	F1H1C104A008	C CHIP 16V 0.1UF	
C5033	F1H1C104A008	C CHIP 16V 0.1UF	
C5034	F1H1C104A008	C CHIP 16V 0.1UF	
C5035	F1H1C104A008	C CHIP 16V 0.1UF	
C5036	F1H1C104A008	C CHIP 16V 0.1UF	
C5037	F1H1C104A008	C CHIP 16V 0.1UF	
C5038	F1J1A1050004	C CHIP 10V 1UF	
C5039	F1H1C104A008	C CHIP 16V 0.1UF	
C5040	F1H1C104A008	C CHIP 16V 0.1UF	
C5041	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C5042	F1H1C104A008	C CHIP 16V 0.1UF	
C5043	F1H1C104A008	C CHIP 16V 0.1UF	
C5044	F1H1C104A008	C CHIP 16V 0.1UF	
C5045	F1H1C104A008	C CHIP 16V 0.1UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C5046	F1H1C104A008	C CHIP 16V 0.1UF	
C5047	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C5048	F1H1C104A008	C CHIP 16V 0.1UF	
C5049	F1H1C104A008	C CHIP 16V 0.1UF	
C5050	F1H1C104A008	C CHIP 16V 0.1UF	
C5051	F1H1C104A008	C CHIP 16V 0.1UF	
C5052	F1H1C104A008	C CHIP 16V 0.1UF	
C5053	F1H1C104A008	C CHIP 16V 0.1UF	
C5054	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C5055	F1H1C104A008	C CHIP 16V 0.1UF	
C5056	F1H1C104A008	C CHIP 16V 0.1UF	
C5057	F1H1C104A008	C CHIP 16V 0.1UF	
C5058	F1H1C104A008	C CHIP 16V 0.1UF	
C5059	F1H1C104A008	C CHIP 16V 0.1UF	
C5060	F1H1C104A008	C CHIP 16V 0.1UF	
C5061	F1H1C104A008	C CHIP 16V 0.1UF	
C5062	F1H1E103A029	C CHIP 25V 0.01UF	
C5063	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5065	F1J1A1050004	C CHIP 10V 1UF	
C5066	F1H1C104A008	C CHIP 16V 0.1UF	
C5067	F1H1C104A008	C CHIP 16V 0.1UF	
C5068	F1H1C104A008	C CHIP 16V 0.1UF	
C5069	F1H1C104A008	C CHIP 16V 0.1UF	
C5070	F1H1C104A008	C CHIP 16V 0.1UF	
C5071	F1H1C104A008	C CHIP 16V 0.1UF	
C5072	F1H1C104A008	C CHIP 16V 0.1UF	
C5073	ECJ1VB1H471K	C CHIP 50V 470PF *See Schematic Diagram & Circuit Board Layout Notes	
C5101	F1H1C104A008	C CHIP 16V 0.1UF	
C5102	F1H1A105A019	C CHIP 10V 1UF	
C5103	F1H1E103A029	C CHIP 25V 0.01UF	
C5104	F1H1E103A029	C CHIP 25V 0.01UF	
C5106	F1J1A1050004	C CHIP 10V 1UF	
C5107	F1J1A1050004	C CHIP 10V 1UF	
C5110	F1H1C104A008	C CHIP 16V 0.1UF	
C5111	F1H1C104A041	C CHIP 16V 0.1UF	
C5112	F1H1C104A008	C CHIP 16V 0.1UF	
C5113	F1H1C104A008	C CHIP 16V 0.1UF	
C5114	F1H1C104A008	C CHIP 16V 0.1UF	
C5115	F1H1H471A189	C CHIP 50V 470PF	
C5116	F1H1C104A041	C CHIP 16V 0.1UF	
C5117	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5119	F1H1C104A008	C CHIP 16V 0.1UF	
C5120	F1H1C104A008	C CHIP 16V 0.1UF	
C5121	F1H1C104A008	C CHIP 16V 0.1UF	
C5122	F1H1C104A008	C CHIP 16V 0.1UF	
C5123	F1H1C104A008	C CHIP 16V 0.1UF	
C5124	F1H1H330A230	C CHIP 50V 33PF	
C5125	F1H1H150A230	C CHIP 50V 15PF	
C5126	F1H1H680A736	C CHIP 50V 68PF	
C5128	F1H1C104A008	C CHIP 16V 0.1UF	
C5129	F1H1H150A230	C CHIP 50V 15PF	
C5130	F1H1C104A008	C CHIP 16V 0.1UF	
C5131	F1H1H120A230	C CHIP 50V 12PF	
C5132	F1H1H120A230	C CHIP 50V 12PF	
C5133	F1H1C104A008	C CHIP 16V 0.1UF	
C5134	F1H1C104A008	C CHIP 16V 0.1UF	
C5135	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C5136	F1H1C104A008	C CHIP 16V 0.1UF	
C5137	F1H1C104A008	C CHIP 16V 0.1UF	
C5138	F1H1C104A008	C CHIP 16V 0.1UF	
C5139	F1H1C104A008	C CHIP 16V 0.1UF	
C5140	F1H1C104A008	C CHIP 16V 0.1UF	
C5141	F1J1A1050004	C CHIP 10V 1UF	
C5142	F1H1C104A008	C CHIP 16V 0.1UF	
C5143	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C5144	F1H1C104A008	C CHIP 16V 0.1UF	
C5145	F1H1C104A008	C CHIP 16V 0.1UF	
C5146	F1H1C104A008	C CHIP 16V 0.1UF	
C5147	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C5148	F1H1C104A008	C CHIP 16V 0.1UF	
C5149	F1H1C104A008	C CHIP 16V 0.1UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C5150	F1H1C104A008	C CHIP 16V 0.1UF	
C5151	F1H1C104A008	C CHIP 16V 0.1UF	
C5152	F1H1C104A008	C CHIP 16V 0.1UF	
C5153	F1H1C104A008	C CHIP 16V 0.1UF	
C5154	F1H1C104A008	C CHIP 16V 0.1UF	
C5155	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5157	F1H1C104A008	C CHIP 16V 0.1UF	
C5158	F1H1C104A008	C CHIP 16V 0.1UF	
C5159	F1H1C104A008	C CHIP 16V 0.1UF	
C5160	F1H1C104A008	C CHIP 16V 0.1UF	
C5161	F1H1C104A008	C CHIP 16V 0.1UF	
C5162	F1H1H180A230	C CHIP 50V 18PF	
C5163	F1H1H180A230	C CHIP 50V 18PF	
C5175	F1H1C104A008	C CHIP 16V 0.1UF	
C5180	ECJ2YB0J225K	C CHIP 6.3V 2.2UF *See Schematic Diagram & Circuit Board Layout Notes	
C5181	ECJ1VF1A105Z	C CHIP 10V 1UF *See Schematic Diagram & Circuit Board Layout Notes	
C5304	F1H1C104A008	C CHIP 16V 0.1UF	
C5305	F1H1C104A008	C CHIP 16V 0.1UF	
C5306	F1H1C104A008	C CHIP 16V 0.1UF	
C5308	F1H1C104A008	C CHIP 16V 0.1UF	
C5309	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5310	F1H1C104A008	C CHIP 16V 0.1UF	
C5311	F1H1C104A008	C CHIP 16V 0.1UF	
C5312	F1H1C104A008	C CHIP 16V 0.1UF	
C5313	F1H1C104A008	C CHIP 16V 0.1UF	
C5314	F1H1C104A008	C CHIP 16V 0.1UF	
C5315	F1H1C104A008	C CHIP 16V 0.1UF	
C5316	F1H1C104A008	C CHIP 16V 0.1UF	
C5317	F1H1C104A008	C CHIP 16V 0.1UF	
C5319	F1H1H221A009	C CHIP 50V 220PF	
C5320	F1J1A1050004	C CHIP 10V 1UF	
C5322	F1H1C104A008	C CHIP 16V 0.1UF	
C5323	F1H1C104A008	C CHIP 16V 0.1UF	
C5324	F1H1C104A008	C CHIP 16V 0.1UF	
C5326	F1J1A1050004	C CHIP 10V 1UF	
C5327	F1H1C104A008	C CHIP 16V 0.1UF	
C5328	F1H1C104A008	C CHIP 16V 0.1UF	
C5329	F1H1C104A008	C CHIP 16V 0.1UF	
C5330	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5331	F1H1C104A008	C CHIP 16V 0.1UF	
C5332	F1H1C104A008	C CHIP 16V 0.1UF	
C5333	F1H1C104A008	C CHIP 16V 0.1UF	
C5334	F1H1C104A008	C CHIP 16V 0.1UF	
C5335	F1H1C104A008	C CHIP 16V 0.1UF	
C5336	F1H1C104A008	C CHIP 16V 0.1UF	
C5338	F1H1C104A008	C CHIP 16V 0.1UF	
C5339	F1H1C104A008	C CHIP 16V 0.1UF	
C5340	F1H1C104A008	C CHIP 16V 0.1UF	
C5341	F1H1C104A008	C CHIP 16V 0.1UF	
C5342	F1H1C104A008	C CHIP 16V 0.1UF	
C5343	F1H1C104A008	C CHIP 16V 0.1UF	
C5344	F1H1C104A008	C CHIP 16V 0.1UF	
C5345	ECJ1VC1H121J	C CHIP 50V 120PF	
C5346	F1J1A1050004	C CHIP 10V 1UF	
C5348	F1J1A1050004	C CHIP 10V 1UF	
C5350	F1J1A1050004	C CHIP 10V 1UF	
C5351	F1H1C104A008	C CHIP 16V 0.1UF	
C5352	F1H1C104A008	C CHIP 16V 0.1UF	
C5353	F1H1C104A008	C CHIP 16V 0.1UF	
C5354	F1H1C104A008	C CHIP 16V 0.1UF	
C5355	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5356	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5357	F1H1C104A008	C CHIP 16V 0.1UF	
C5358	F1H1C104A008	C CHIP 16V 0.1UF	
C5359	F1H1C104A008	C CHIP 16V 0.1UF	
C5360	F1H1C104A008	C CHIP 16V 0.1UF	
C5361	F1H1C104A008	C CHIP 16V 0.1UF	
C5362	F1H1C104A008	C CHIP 16V 0.1UF	
C5363	F1H1C104A008	C CHIP 16V 0.1UF	
C5364	F1H1C104A008	C CHIP 16V 0.1UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C5366	F1H1C104A008	C CHIP 16V 0.1UF	
C5367	F1H1C104A008	C CHIP 16V 0.1UF	
C5368	F1H1C104A008	C CHIP 16V 0.1UF	
C5369	F1H1C104A008	C CHIP 16V 0.1UF	
C5370	F1H1C104A008	C CHIP 16V 0.1UF	
C5371	F1H1C104A008	C CHIP 16V 0.1UF	
C5372	F1H1C104A008	C CHIP 16V 0.1UF	
C5373	F1H1C104A008	C CHIP 16V 0.1UF	
C5374	F1H1C104A008	C CHIP 16V 0.1UF	
C5375	F1H1C104A008	C CHIP 16V 0.1UF	
C5376	F1H1C104A008	C CHIP 16V 0.1UF	
C5378	F1H1C104A008	C CHIP 16V 0.1UF	
C5380	F1J1A1050004	C CHIP 10V 1UF	
C5381	F1H1H471A189	C CHIP 50V 470PF	
C5382	F1J1A1050004	C CHIP 10V 1UF	
C5384	F1H1C104A008	C CHIP 16V 0.1UF	
C5385	F1H1C104A008	C CHIP 16V 0.1UF	
C5386	F1H1C104A008	C CHIP 16V 0.1UF	
C5387	F1H1C104A008	C CHIP 16V 0.1UF	
C5388	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5389	F1H1C104A008	C CHIP 16V 0.1UF	
C5390	F1H1C104A008	C CHIP 16V 0.1UF	
C5392	F1H1C104A008	C CHIP 16V 0.1UF	
C5393	F1H1C104A008	C CHIP 16V 0.1UF	
C5394	F1H1C104A008	C CHIP 16V 0.1UF	
C5395	F1H1C104A008	C CHIP 16V 0.1UF	
C5396	F1H1C104A008	C CHIP 16V 0.1UF	
C5397	F1H1C104A008	C CHIP 16V 0.1UF	
C5398	F1H1C104A008	C CHIP 16V 0.1UF	
C5399	F1H1C104A008	C CHIP 16V 0.1UF	
C5400	F1H1C104A008	C CHIP 16V 0.1UF	
C5401	F1H1C104A008	C CHIP 16V 0.1UF	
C5402	F1H1C104A008	C CHIP 16V 0.1UF	
C5404	F1H1C104A008	C CHIP 16V 0.1UF	
C5408	F1H1C104A008	C CHIP 16V 0.1UF	
C5409	F1H1C104A008	C CHIP 16V 0.1UF	
C5429	F1H1H103A219	C CHIP 50V 0.01UF	
C5514	F1H1C104A008	C CHIP 16V 0.1UF	
C5515	EEE0JA101SP	ELECTROLYTIC 6.3V 100UF	
C5517	F1H1C104A008	C CHIP 16V 0.1UF	
C5519	F1H1E103A029	C CHIP 25V 0.01UF	
C5522	F1H1C104A041	C CHIP 16V 0.1UF	
C5562	F1H1C104A008	C CHIP 16V 0.1UF	
C5563	F1H1C104A041	C CHIP 16V 0.1UF	
C5701	F1H1C104A008	C CHIP 16V 0.1UF	
C5702	F1H1C104A008	C CHIP 16V 0.1UF	
C5704	F1H1C104A008	C CHIP 16V 0.1UF	
C5705	F1H1C104A008	C CHIP 16V 0.1UF	
C5706	F1H1C104A008	C CHIP 16V 0.1UF	
C5707	F1H1C104A008	C CHIP 16V 0.1UF	
C5708	F1H1C104A008	C CHIP 16V 0.1UF	
C5709	F1H1C104A008	C CHIP 16V 0.1UF	
C5710	F1J1A1050004	C CHIP 10V 1UF	
C5711	F1H1C104A008	C CHIP 16V 0.1UF	
C5712	F1H1C104A008	C CHIP 16V 0.1UF	
C5713	F1H1C104A008	C CHIP 16V 0.1UF	
C5714	F1H1C104A008	C CHIP 16V 0.1UF	
C5726	F1H1C104A041	C CHIP 16V 0.1UF	
C5727	F1H1C104A041	C CHIP 16V 0.1UF	
C5728	F1H1C104A041	C CHIP 16V 0.1UF	
C5729	F1H1A105A019	C CHIP 10V 1UF	
C5730	F1H1E103A029	C CHIP 25V 0.01UF	
C5731	F1J1A1050004	C CHIP 10V 1UF	
C5733	F1H1C104A041	C CHIP 16V 0.1UF	
C5734	F1H1C104A041	C CHIP 16V 0.1UF	
C5801	F1H1C104A008	C CHIP 16V 0.1UF	
C5802	F1H1C104A008	C CHIP 16V 0.1UF	
C5803	F1H1A105A019	C CHIP 10V 1UF	
C5804	F1H1C104A008	C CHIP 16V 0.1UF	
C5805	EEE0JA220SR	ELECTROLYTIC 6.3V 22UF	
C5806	F1H1C104A008	C CHIP 16V 0.1UF	
C5819	F1H1C104A008	C CHIP 16V 0.1UF	
C5820	F1H1C104A008	C CHIP 16V 0.1UF	
C5821	F1H1C104A008	C CHIP 16V 0.1UF	
C5822	F1H1C104A008	C CHIP 16V 0.1UF	
C5823	F1H1C104A008	C CHIP 16V 0.1UF	
C5824	F1H1C104A008	C CHIP 16V 0.1UF	
C5825	F1H1C104A008	C CHIP 16V 0.1UF	
C5826	F1H1C104A008	C CHIP 16V 0.1UF	
C5827	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5828	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5829	F1H1C104A008	C CHIP 16V 0.1UF	
C5830	F1H1C104A008	C CHIP 16V 0.1UF	
C5831	F1H1H103A220	C CHIP 50V 0.01UF	
C5832	F1H1C104A008	C CHIP 16V 0.1UF	
C5833	F1H1H103A220	C CHIP 50V 0.01UF	
C5834	F1H1C104A008	C CHIP 16V 0.1UF	
C5835	F1H1C104A008	C CHIP 16V 0.1UF	
C5836	F1H1C104A008	C CHIP 16V 0.1UF	
C5837	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5838	F1H1C104A008	C CHIP 16V 0.1UF	
C5839	F1H1C104A008	C CHIP 16V 0.1UF	
C5840	F1H1C104A008	C CHIP 16V 0.1UF	
C5841	EEE0JA470SR	ELECTROLYTIC 6.3V 47UF	
C5842	EEE1CA100SR	ELECTROLYTIC 16V 10UF	
C5843	F1H1C104A008	C CHIP 16V 0.1UF	
C5844	EEE1CA4R7NR	ELECTROLYTIC 16V 4.7UF	
C5845	EEE1CA4R7NR	ELECTROLYTIC 16V 4.7UF	
C5846	F1H1C104A008	C CHIP 16V 0.1UF	
C5847	F1H1H181A230	C CHIP 50V 180PF	
C5848	F1H1H181A230	C CHIP 50V 180PF	
C5849	F1H1H330A230	C CHIP 50V 33PF	
C5850	F1H1H330A230	C CHIP 50V 33PF	
C5851	F1H1C104A008	C CHIP 16V 0.1UF	
C5852	EEE1CA100SR	ELECTROLYTIC 16V 10UF	
C5853	EEE1CA100SR	ELECTROLYTIC 16V 10UF	
C5854	F1H1H272A219	C CHIP 50V 2700PF	
C5855	F1H1H272A219	C CHIP 50V 2700PF	
C5856	EEE0JA470SR	ELECTROLYTIC 6.3V 47UF	
C5857	EEE0JA470SR	ELECTROLYTIC 6.3V 47UF	
C5858	F1H1C104A008	C CHIP 16V 0.1UF	
C5866	F1H1C104A008	C CHIP 16V 0.1UF	
C5867	F1H1C104A008	C CHIP 16V 0.1UF	
C5868	F1H1C104A008	C CHIP 16V 0.1UF	
C5870	F1H1C104A008	C CHIP 16V 0.1UF	
C5871	F1H1C104A008	C CHIP 16V 0.1UF	
C5872	F1H1C104A008	C CHIP 16V 0.1UF	
C5877	F1J0J2250003	C CHIP 6.3V 2.2UF	
C5878	F1H1H471A189	C CHIP 50V 470PF	
C5879	F1H1A105A019	C CHIP 10V 1UF	
C5900	F1H1A105A019	C CHIP 10V 1UF	
C5901	F1H1E103A029	C CHIP 25V 0.01UF	
C5902	F1J1A1050004	C CHIP 10V 1UF	
C5903	F1H1C104A008	C CHIP 16V 0.1UF	
C5904	F1H1C104A008	C CHIP 16V 0.1UF	
C5905	F1H1H103A220	C CHIP 50V 0.01UF	
C5906	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5907	F1H1H103A220	C CHIP 50V 0.01UF	
C5908	F1H1C104A008	C CHIP 16V 0.1UF	
C5909	F1H1C104A008	C CHIP 16V 0.1UF	
C5910	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5911	F1H1C104A008	C CHIP 16V 0.1UF	
C5912	F1H1C104A008	C CHIP 16V 0.1UF	
C5913	F1H1H180A230	C CHIP 50V 18PF	
C5914	F1H1H180A230	C CHIP 50V 18PF	
C6003	F1H1H101A230	C CHIP 50V 100PF	
C6004	F1H1H471A737	C CHIP 50V 470PF	
C6005	F1H1H471A737	C CHIP 50V 470PF	
C6006	F1H1H5610004	C CHIP 50V 560PF	
C6007	F1H1H5610004	C CHIP 50V 560PF	
C6008	F1J1A1050004	C CHIP 10V 1UF	
C6009	F1J1A1050004	C CHIP 10V 1UF	
C6010	F1H1C104A008	C CHIP 16V 0.1UF	
C6011	EEE0JA220NR	ELECTROLYTIC 6.3V 2.2UF	
C6012	EEE0JA220NR	ELECTROLYTIC 6.3V 2.2UF	
C6015	F1H1H101A230	C CHIP 50V 100PF	

Ref. No.	Part No.	Part Name & Description	Remarks
C6016	F1H1H101A230	C CHIP 50V 100PF	
C6017	F1H1C104A008	C CHIP 16V 0.1UF	
C6018	F1H1E103A029	C CHIP 25V 0.01UF	
C6019	F1J1A1050004	C CHIP 10V 1UF	
C6020	F1H1H101A230	C CHIP 50V 100PF	
C6021	F1H1H101A230	C CHIP 50V 100PF	
C6024	F1H1C104A008	C CHIP 16V 0.1UF	
C6025	F1J1A1050004	C CHIP 10V 1UF	
C6026	F1J1A1050004	C CHIP 10V 1UF	
C6027	F1H1C104A008	C CHIP 16V 0.1UF	
C6028	F1H1C104A008	C CHIP 16V 0.1UF	
C6029	F1H1C104A008	C CHIP 16V 0.1UF	
C6030	F1H1C104A008	C CHIP 16V 0.1UF	
C6031	F1H1C104A008	C CHIP 16V 0.1UF	
C6032	F1H1C104A008	C CHIP 16V 0.1UF	
C6033	F1H1C104A008	C CHIP 16V 0.1UF	
C6034	F1H1C104A008	C CHIP 16V 0.1UF	
C6035	F1H1H101A230	C CHIP 50V 100PF	
C6036	F1H1H180A230	C CHIP 50V 18PF	
C6037	F1H1C104A008	C CHIP 16V 0.1UF	
C6038	F1H1H180A230	C CHIP 50V 18PF	
C6039	EEE0JA101SP	ELECTROLYTIC 6.3V 100UF	
C6041	F1H1C104A008	C CHIP 16V 0.1UF	
C6042	F1J1A1050004	C CHIP 10V 1UF	
C6043	F1H1C104A008	C CHIP 16V 0.1UF	
C6044	F1H1C104A008	C CHIP 16V 0.1UF	
C6045	EEE1CA100SR	ELECTROLYTIC 16V 10UF	
C6046	F1H1C104A041	C CHIP 16V 0.1UF	
C6047	F1H1C104A008	C CHIP 16V 0.1UF	
C6048	F1H1C104A008	C CHIP 16V 0.1UF	
C6049	F1H1C104A008	C CHIP 16V 0.1UF	
C6050	F1H1E103A029	C CHIP 25V 0.01UF	
C6051	F1H1C104A041	C CHIP 16V 0.1UF	
C6053	F1H1C104A041	C CHIP 16V 0.1UF	
C6074	F1H1C104A041	C CHIP 16V 0.1UF	
C6076	F1H1H101A230	C CHIP 50V 100PF	
C6078	F1H1C104A008	C CHIP 16V 0.1UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L3401	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3402	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L3403	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L3404	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L3405	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3406	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L3407	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L3408	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L3409	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L3410	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3411	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L4101	ELJFA101KFB	COIL CHIP 100UH	
L5001	J0JHC0000018	COIL CHIP 42UH	
L5002	J0JHC0000018	COIL CHIP 42UH	
L5003	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5004	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5005	G1C2R2JA0041	COIL CHIP 2.2UH	
L5006	G1C100JA0041	COIL CHIP 10UH	
L5007	G1C100JA0041	COIL CHIP 10UH	
L5008	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5009	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5010	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5102	J0JHC0000018	COIL CHIP 42UH	
L5104	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5105	G1C100JA0041	COIL CHIP 10UH	
L5106	G1C1R0JA0041	COIL CHIP 1UH	
L5107	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5108	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5303	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5304	J0JHC0000018	COIL CHIP 42UH	
L5305	G1C100JA0041	COIL CHIP 10UH	
L5307	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5308	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5309	J0JHC0000018	COIL CHIP 42UH	
L5311	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5312	J0JHC0000018	COIL CHIP 42UH	
L5313	J0JHC0000018	COIL CHIP 42UH	
L5314	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L5315	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L5316	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L5317	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L5527	ELJFA330KFB	COIL CHIP 33UH	
L5528	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5701	J0JHC0000018	COIL CHIP 42UH	
L5702	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5703	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5704	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5705	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5711	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L5712	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L5713	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L5801	J0JHC0000018	COIL CHIP 42UH	
L5802	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5803	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L5807	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L5808	J0JHC0000018	COIL CHIP 42UH	
L5809	J0JHC0000018	COIL CHIP 42UH	
L5810	ELJFA330KFB	COIL CHIP 33UH	
L5811	ELJFA330KFB	COIL CHIP 33UH	
L5812	J0JHC0000018	COIL CHIP 42UH	
L6001	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L6004	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L6005	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L6006	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L6007	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L6008	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L6011	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L6031	ERJ3GEY0R00V	MGF CHIP 1/16W 0	

CRYSTAL OSCILLATOR

Ref. No.	Part No.	Part Name & Description	Remarks
X5101	H0J202500011	CRYSTAL OSCILLATOR	
X5702	H1Z7565B0001	CRYSTAL OSCILLATOR	
X5801	H0J283500016	CRYSTAL OSCILLATOR	
X6001	H0J327200115	CRYSTAL OSCILLATOR	
X6002	H2D400400012	CRYSTAL OSCILLATOR	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P3401	K1KA65B00003	CONNECTOR 65P	
P5301	K1KBB0A00006	CONNECTOR 110P	
P5701	K1KA20B00153	CONNECTOR 20P	
P6005	K1KA07AA0150	CONNECTOR 7P	
P6008	K1KA05BA0047	CONNECTOR 5P	

JACKS

Ref. No.	Part No.	Part Name & Description	Remarks
JK4101	K2HA204B0132	AUDIO JACK SOCKET	
JK5801	K1FA119E0001	HDNI JACK SOKET	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
701	LSSC0771	MAIN SHIELD CASE TOP,STEEL	
702	LSSC0772	MAIN SHIELD CASE BOTTOM,STEEL	
705	LSMF0319	SHEET	
714	VMTS0035	CUSHION,RUBBER	

15.5.2. MAIN CHILD C.B.A.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC5001	C0DBFFD00005	IC, LIENAR *See Schematic Diagram & Circuit Board Layout Notes	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C5073	ECJ1VB1H471K	C CHIP 50V 470PF *See Schematic Diagram & Circuit Board Layout Notes	
C5180	F1J0J2250003	C CHIP 6.3V 2.2UF *See Schematic Diagram & Circuit Board Layout Notes	
C5181	F1H1A105A019	C CHIP 10V 1UF *See Schematic Diagram & Circuit Board Layout Notes	

15.5.3. BASE C.B.A.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC1101	C0CBCDD00004	IC, LINEAR	
IC1103	C0DBAZH00013	IC, LINEAR	
IC1105	C0DBAZH00012	IC, LINEAR	
IC1106	C0DBAZH00012	IC, LINEAR	
IC3001	C1AB00001991	IC, LINEAR	
IC4001	C0ABBB000256	IC, LINEAR	
IC4002	C0JBAR000344	IC, CMOS STANDARD LOGIC	E.S.D.
IC4003	C0JBAR000344	IC, CMOS STANDARD LOGIC	E.S.D.
IC4004	C0JBAR000344	IC, CMOS STANDARD LOGIC	E.S.D.
IC4005	C0ABBB000256	IC, LINEAR	
IC4201	C1BB00000772	IC, LINEAR	
IC4501	C1BA00000440	IC, LINEAR	
IC4502	C0BBBA000076	IC, LINEAR	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q1101	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q1101	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1102	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q1102	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q1102	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q1103	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q1103	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q1103	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q1104	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q1104	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1105	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q1105	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q1105	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q1106	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q1106	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1107	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q1107	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1108	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q1108	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1109	2SB1218ASL	TRANSISTOR SI PNP CHIP	
Q1110	2SB1218ASL	TRANSISTOR SI PNP CHIP	
Q1111	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q1111	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1112	B1DHDC000018	TRANSISTOR FET CHIP	
Q1113	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q1113	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1114	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q1114	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q3001	2SB1218AHL	TRANSISTOR SI PNP CHIP	
or Q3001	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q3002	2SB1218AHL	TRANSISTOR SI PNP CHIP	
or Q3002	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q3003	2SB1218AHL	TRANSISTOR SI PNP CHIP	
or Q3003	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q3004	2SB1218AHL	TRANSISTOR SI PNP CHIP	
or Q3004	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q3005	2SB1218AHL	TRANSISTOR SI PNP CHIP	
or Q3005	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q3006	2SB1218AHL	TRANSISTOR SI PNP CHIP	
or Q3006	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q3007	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q3007	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q3007	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q3008	2SD132800L	TRANSISTOR SI NPN CHIP	
Q3009	2SD132800L	TRANSISTOR SI NPN CHIP	
Q3201	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q3201	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q3201	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q3202	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q3202	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q3202	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q3203	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q3203	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q3203	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q3204	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q3204	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q3204	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q3205	2SC563200L	TRANSISTOR SI NPN CHIP	
Q3206	2SC563200L	TRANSISTOR SI NPN CHIP	
Q3207	2SC563200L	TRANSISTOR SI NPN CHIP	
Q3208	2SC563200L	TRANSISTOR SI NPN CHIP	
Q3209	2SC563200L	TRANSISTOR SI NPN CHIP	
Q3210	2SC563200L	TRANSISTOR SI NPN CHIP	
Q3211	2SC563200L	TRANSISTOR SI NPN CHIP	
Q3212	2SC563200L	TRANSISTOR SI NPN CHIP	
Q4001	2SB0709A0L	TRANSISTOR SI PNP CHIP	
or Q4001	B1ADCC000004	TRANSISTOR SI PNP CHIP	
or Q4001	B1ADCF000001	TRANSISTOR SI PNP CHIP	
or Q4001	B1ADCF000077	TRANSISTOR SI PNP CHIP	
Q4002	2SD0601ASL	TRANSISTOR SI NPN CHIP	
Q4502	2SB0709A0L	TRANSISTOR SI PNP CHIP	
or Q4502	B1ADCC000004	TRANSISTOR SI PNP CHIP	
or Q4502	B1ADCF000001	TRANSISTOR SI PNP CHIP	
or Q4502	B1ADCF000077	TRANSISTOR SI PNP CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D1101	MA2J111008	DIODE SI CHIP	
or D1101	B0ACCK000005	DIODE SI CHIP	
or D1101	MA2J11100L	DIODE SI CHIP	
D1102	MA2J111008	DIODE SI CHIP	
or D1102	B0ACCK000005	DIODE SI CHIP	

Ref. No.	Part No.	Part Name & Description	Remarks
or D1102	MA2J11100L	DIODE SI CHIP	
D1103	MA2J11300L	DIODE SI CHIP	
D1105	MA2J11300L	DIODE SI CHIP	
D1106	MA2J11300L	DIODE SI CHIP	
D1107	B0JCME000041	DIODE SI CHIP	
D1111	MAZ80910ML	DIODE ZENER CHIP 9.1V	
D1112	MA2J111008	DIODE SI CHIP	
or D1112	B0ACCK000005	DIODE SI CHIP	
or D1112	MA2J11100L	DIODE SI CHIP	
D1113	MAZ80680ML	DIODE ZENER CHIP 6.8V	
D1114	MA2J111008	DIODE SI CHIP	
or D1114	B0ACCK000005	DIODE SI CHIP	
or D1114	MA2J11100L	DIODE SI CHIP	
D1115	MA2J111008	DIODE SI CHIP	
or D1115	B0ACCK000005	DIODE SI CHIP	
or D1115	MA2J11100L	DIODE SI CHIP	
D1116	MAZ80330HL	DIODE ZENER CHIP 3.3V	
D1117	MA2J111008	DIODE SI CHIP	
or D1117	B0ACCK000005	DIODE SI CHIP	
or D1117	MA2J11100L	DIODE SI CHIP	
D1118	MA2J111008	DIODE SI CHIP	
or D1118	B0ACCK000005	DIODE SI CHIP	
or D1118	MA2J11100L	DIODE SI CHIP	
D1119	MAZ80330HL	DIODE ZENER CHIP 3.3V	
D1120	MA2J111008	DIODE SI CHIP	
or D1120	B0ACCK000005	DIODE SI CHIP	
or D1120	MA2J11100L	DIODE SI CHIP	
D1121	MA2J111008	DIODE SI CHIP	
or D1121	B0ACCK000005	DIODE SI CHIP	
or D1121	MA2J11100L	DIODE SI CHIP	
D1123	MA2J111008	DIODE SI CHIP	
or D1123	B0ACCK000005	DIODE SI CHIP	
or D1123	MA2J11100L	DIODE SI CHIP	
D1124	MA2J111008	DIODE SI CHIP	
or D1124	B0ACCK000005	DIODE SI CHIP	
or D1124	MA2J11100L	DIODE SI CHIP	
D1125	B0HAMM000105	DIODE SI	
D1126	B0HAMM000105	DIODE SI	
D1127	MAZ80510ML	DIODE ZENER CHIP 5.1V	
D1128	MA2J72900L	DIODE SI CHIP	
D1129	MA2J111008	DIODE SI CHIP	
or D1129	B0ACCK000005	DIODE SI CHIP	
or D1129	MA2J11100L	DIODE SI CHIP	
D1130	MA2J111008	DIODE SI CHIP	
or D1130	B0ACCK000005	DIODE SI CHIP	
or D1130	MA2J11100L	DIODE SI CHIP	
D1131	MA2J111008	DIODE SI CHIP	
or D1131	B0ACCK000005	DIODE SI CHIP	
or D1131	MA2J11100L	DIODE SI CHIP	
D1132	MA2J111008	DIODE SI CHIP	
or D1132	B0ACCK000005	DIODE SI CHIP	
or D1132	MA2J11100L	DIODE SI CHIP	
D1133	MA2J111008	DIODE SI CHIP	
or D1133	B0ACCK000005	DIODE SI CHIP	
or D1133	MA2J11100L	DIODE SI CHIP	
D1134	MAZ80510ML	DIODE ZENER CHIP 5.1V	
D3016	MA2J111008	DIODE SI CHIP	
or D3016	B0ACCK000005	DIODE SI CHIP	
or D3016	MA2J11100L	DIODE SI CHIP	
D3018	MA2J72900L	DIODE SI CHIP	
D4505	MAZ42700MF	DIODE ZENER 27V	
D4506	MAZ81500ML	DIODE ZENER CHIP 15V	
D4507	MAZ81500ML	DIODE ZENER CHIP 15V	
D4508	MA2J111008	DIODE SI CHIP	
or D4508	B0ACCK000005	DIODE SI CHIP	
or D4508	MA2J11100L	DIODE SI CHIP	
D4509	MA2J111008	DIODE SI CHIP	
or D4509	B0ACCK000005	DIODE SI CHIP	
or D4509	MA2J11100L	DIODE SI CHIP	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R1101	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R1102	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R1103	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R1104	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R1105	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1106	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1107	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1108	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1109	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R1110	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1111	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1112	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R1113	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R1114	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R1115	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R1121	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R1122	ERJ6GEYJ105V	MGF CHIP 1/10W 1M	
R1125	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R1126	D0HD184ZA002	MGF CHIP 1/10W 180K	
R1127	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R1128	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R1129	ERJ6GEYJ470V	MGF CHIP 1/10W 47	
R1130	ERJ6GEYJ334V	MGF CHIP 1/10W 330K	
R1131	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R1132	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R1133	ERJ6GEYJ334V	MGF CHIP 1/10W 330K	
R1134	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1135	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R1136	D0HD184ZA002	MGF CHIP 1/10W 180K	
R1137	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R1138	D0HD184ZA002	MGF CHIP 1/10W 180K	
R1139	ERJ6GEYJ470V	MGF CHIP 1/10W 47	
R1140	ERJ6GEYJ470V	MGF CHIP 1/10W 47	
R1141	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R1142	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R1143	ERJ6GEYJ822V	MGF CHIP 1/10W 8.2K	
R1144	ERJ6GEYJ822V	MGF CHIP 1/10W 8.2K	
R1145	ERJ12YJ100H	MGF CHIP 1/2W 10	
R1146	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1147	ERJ12YJ100H	MGF CHIP 1/2W 10	
R1148	ERJ12YJ100H	MGF CHIP 1/2W 10	
R1149	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1150	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1152	ERX1SZJR10E	METAL FILM 1W 0.1	

Ref. No.	Part No.	Part Name & Description	Remarks
R1153	ERX1SZJR10E	METAL FILM 1W 0.1	
R1156	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R1157	ERX1SZJR10E	METAL FILM 1W 0.1	
R1158	ERX1SZJR10E	METAL FILM 1W 0.1	
R1162	ERX1SZJR10E	METAL FILM 1W 0.1	
R1163	ERX1SZJR10E	METAL FILM 1W 0.1	
R1165	D0HD103ZA002	MGF CHIP 1/10W 10K	
R1167	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1168	D0HD271ZA002	MGF CHIP 1/10W 270	
R1169	D0HD222ZA002	MGF CHIP 1/10W 2.2K	
R1170	D0HD222ZA002	MGF CHIP 1/10W 2.2K	
R1171	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1175	D0HD103ZA002	MGF CHIP 1/10W 10K	
R1176	D0HD103ZA002	MGF CHIP 1/10W 10K	
R1177	D0HD391ZA002	MGF CHIP 1/10W 390	
R1178	D0HD220ZA006	MGF CHIP 1/10W 22	
R1179	D0HD102ZA002	MGF CHIP 1/10W 1K	
R1180	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R1181	D0HD330ZA006	MGF CHIP 1/10W 33	
R1182	D0HD102ZA002	MGF CHIP 1/10W 1K	
R1183	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K	
R1184	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R1185	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R1186	ERJ6GEYJ331V	MGF CHIP 1/10W 330	
R1187	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R1188	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R1189	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R1190	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R1191	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1194	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1196	ERDS2TJ122T	CARBON 1/4W 1.2K	
R1197	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R1198	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R3001	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R3002	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R3003	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R3004	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R3005	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R3006	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R3010	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R3011	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R3013	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R3014	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R3016	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R3017	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R3019	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3020	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3021	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3022	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3023	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3024	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3025	ERJ3GEYJ391V	MGF CHIP 1/16W 390	
R3026	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3027	ERJ3GEYJ391V	MGF CHIP 1/16W 390	
R3028	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3029	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3030	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3031	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3032	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3033	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3034	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3035	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3036	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3037	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3038	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3039	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3040	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3041	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3042	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3043	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3044	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3046	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3047	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3048	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3049	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3050	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3051	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3052	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3053	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3054	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3055	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3204	ERJ3GEYJ823V	MGF CHIP 1/16W 82K	
R3205	ERJ3GEYJ823V	MGF CHIP 1/16W 82K	
R3206	ERJ3GEYJ823V	MGF CHIP 1/16W 82K	
R3207	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R3208	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	
R3209	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3210	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3211	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3212	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3213	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3214	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3215	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	
R3216	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R3217	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R3218	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R3219	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3220	ERA3YED561V	MGF CHIP 1/16W 560	
R3221	ERA3YED681V	MGF CHIP 1/16W 680	
R3222	ERA3YED331V	MGF CHIP 1/16W 330	
R3223	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3224	ERA3YED911V	MGF CHIP 1/16W 910	
R3225	ERA3YED471V	MGF CHIP 1/16W 470	
R3226	ERA3YED242V	MGF CHIP 1/16W 2.4K	
R3227	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3228	ERA3YED561V	MGF CHIP 1/16W 560	
R3229	ERA3YED151V	MGF CHIP 1/16W 150	
R3230	ERA3YED821V	MGF CHIP 1/16W 820	
R3231	ERA3YED301V	MGF CHIP 1/16W 300	
R3232	ERA3YED561V	MGF CHIP 1/16W 560	
R3233	ERA3YED301V	MGF CHIP 1/16W 300	
R3234	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R3235	ERA3YED301V	MGF CHIP 1/16W 300	
R3236	ERA3YED561V	MGF CHIP 1/16W 560	
R3240	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R3241	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R3242	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R4001	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4002	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4003	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4004	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4005	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4006	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4007	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4008	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4009	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4010	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4011	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4012	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4013	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4014	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4015	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4016	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4017	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4018	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4019	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4020	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4021	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4022	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4023	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4024	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4025	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4026	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4027	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4028	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4029	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	

Ref. No.	Part No.	Part Name & Description	Remarks
R4030	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4031	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4032	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4033	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4034	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4035	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4036	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4037	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4038	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4039	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4040	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4041	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4042	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4043	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R4044	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R4045	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4046	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4047	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4048	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4049	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4205	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4206	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4207	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R4208	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R4209	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R4210	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R4501	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R4502	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R4503	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4504	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4505	ERJ3GEYJ154V	MGF CHIP 1/16W 150K	
R4506	ERJ3GEYJ154V	MGF CHIP 1/16W 150K	
R4507	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R4508	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R4509	ERDS2TJ332T	CARBON 1/4W 3.3K	
R4511	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R4512	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R4513	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R4515	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4516	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R4517	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R4519	ERJ8GEYJ100V	MGF CHIP 1/8W 10	
R4521	ERJ8GEYJ100V	MGF CHIP 1/8W 10	
R4522	ERJ1TYJ220U	MGF CHIP 1W 22	
R4523	ERJ1TYJ220U	MGF CHIP 1W 22	
R4524	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R4528	ERDS2TJ392	CARBON 1/4W 3.9K	
R4530	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4531	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4532	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R4533	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R4534	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R4535	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4550	ERJ6GEYJ561V	MGF CHIP 1/10W 560	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C1101	F1J1C1050011	C CHIP 16V 1UF	
C1102	F1J1C2240007	C CHIP 16V 0.22UF	
C1103	F2A0J3300011	ELECTROLYTIC 6.3V 33UF	
C1104	F1J1A1050004	C CHIP 10V 1UF	
C1105	F1J1C2240007	C CHIP 16V 0.22UF	
C1106	F2A1E4710044	ELECTROLYTIC 25V 470UF	
C1107	F2A1E4710044	ELECTROLYTIC 25V 470UF	
C1108	F1K1C2250005	C CHIP 16V 2.2UF	
C1109	F2A1E4710044	ELECTROLYTIC 25V 470UF	
C1110	F2A1E4710044	ELECTROLYTIC 25V 470UF	
C1111	F1K1C2250005	C CHIP 16V 2.2UF	
C1113	F1K1C2250005	C CHIP 16V 2.2UF	
C1116	F1K1C2250005	C CHIP 16V 2.2UF	
C1117	F1K1C2250005	C CHIP 16V 2.2UF	
C1119	F1K1C2250005	C CHIP 16V 2.2UF	
C1120	F1K1C2250005	C CHIP 16V 2.2UF	
C1121	F1K1C2250005	C CHIP 16V 2.2UF	
C1122	F1K1C2250005	C CHIP 16V 2.2UF	
C1124	F1J1C1050011	C CHIP 16V 1UF	
C1125	F1J1H102A623	C CHIP 50V 1000PF	
C1126	F1J1H103A702	C CHIP 50V 0.01UF	
C1130	F1J1E1040007	C CHIP 25V 0.1UF	
C1131	ECJ2VC1H471J	C CHIP 50V 470PF	
C1132	F1J1H102A623	C CHIP 50V 1000PF	
C1133	F1J1C1050011	C CHIP 16V 1UF	
C1134	F1J1H102A623	C CHIP 50V 1000PF	
C1135	F1J1C1050011	C CHIP 16V 1UF	
C1136	F1J1H102A623	C CHIP 50V 1000PF	
C1139	F1J1H103A702	C CHIP 50V 0.01UF	
C1140	F1J1H103A702	C CHIP 50V 0.01UF	
C1144	F1J1H103A702	C CHIP 50V 0.01UF	
C1145	F1J1H103A702	C CHIP 50V 0.01UF	
C1146	F1J1E1040007	C CHIP 25V 0.1UF	
C1147	F1J1E1040007	C CHIP 25V 0.1UF	
C1148	ECJ2VC1H471J	C CHIP 50V 470PF	
C1149	F1J1H102A623	C CHIP 50V 1000PF	
C1150	ECJ2VC1H471J	C CHIP 50V 470PF	
C1151	F1J1H102A623	C CHIP 50V 1000PF	
C1153	F1J1E1040007	C CHIP 25V 0.1UF	
C1156	F1J1H103A702	C CHIP 50V 0.01UF	
C1157	F1J1H103A702	C CHIP 50V 0.01UF	
C1158	F1J1E1040007	C CHIP 25V 0.1UF	
C1159	F1J1E1040007	C CHIP 25V 0.1UF	
C1160	F1J1H102A623	C CHIP 50V 1000PF	
C1163	F1J1H102A623	C CHIP 50V 1000PF	
C1164	F1J1H102A623	C CHIP 50V 1000PF	
C1165	F2A0J331A137	ELECTROLYTIC 6.3V 330UF	
C1169	EEAGA1H1R0H	ELECTROLYTIC 50V 1UF	
C1171	F2A0J331A137	ELECTROLYTIC 6.3V 330UF	
C1173	F2A0J331A137	ELECTROLYTIC 6.3V 330UF	
C1174	F1J1C2240007	C CHIP 16V 0.22UF	
C1175	F1J1C2240007	C CHIP 16V 0.22UF	
C1176	F2A0J331A137	ELECTROLYTIC 6.3V 330UF	
C1177	F2A0J331A137	ELECTROLYTIC 6.3V 330UF	
C1178	F2A0J331A137	ELECTROLYTIC 6.3V 330UF	
C1179	F2A1E4710044	ELECTROLYTIC 25V 470UF	
C1181	F1J1C2240007	C CHIP 16V 0.22UF	
C1182	F1J1E1040007	C CHIP 25V 0.1UF	
C1183	F1J1H103A702	C CHIP 50V 0.01UF	
C1184	F1J1E224A081	C CHIP 25V 0.22UF	
C1185	ECJ2VB1E103K	C CHIP 25V 0.01UF	
C3001	F1H1H100A735	C CHIP 50V 10PF	
C3002	F1H1H100A735	C CHIP 50V 10PF	
C3003	F1H1H100A735	C CHIP 50V 10PF	
C3004	F1H1H100A735	C CHIP 50V 10PF	
C3005	F1H1H100A735	C CHIP 50V 10PF	
C3006	F1H1C104A008	C CHIP 16V 0.1UF	
C3007	F1H1C104A008	C CHIP 16V 0.1UF	
C3008	F1H1A105A028	C CHIP 10V 1UF	
C3009	F1H1A105A028	C CHIP 10V 1UF	
C3011	F1H1A105A028	C CHIP 10V 1UF	
C3012	F1H1H103A748	C CHIP 50V 0.01UF	
C3013	F2A1C1010047	ELECTROLYTIC 16V 100UF	
C3014	F1H1H103A748	C CHIP 50V 0.01UF	
C3015	F1H1A105A028	C CHIP 10V 1UF	
C3017	F1H1A105A028	C CHIP 10V 1UF	
C3018	F1H1H103A748	C CHIP 50V 0.01UF	
C3019	F1H1C104A008	C CHIP 16V 0.1UF	
C3020	F1H1C104A008	C CHIP 16V 0.1UF	
C3021	F1H1A105A028	C CHIP 10V 1UF	
C3023	F1H1A105A028	C CHIP 10V 1UF	
C3024	F1H1C104A008	C CHIP 16V 0.1UF	
C3025	F1H1H103A748	C CHIP 50V 0.01UF	
C3027	F2A1C2200034	ELECTROLYTIC 16V 22UF	
C3030	F2A0J1020034	ELECTROLYTIC 6.3V 1000UF	
C3031	F1H1A105A028	C CHIP 10V 1UF	
C3032	F1H1C104A008	C CHIP 16V 0.1UF	
C3033	F1H1A105A028	C CHIP 10V 1UF	
C3034	F1H1A105A028	C CHIP 10V 1UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C3035	F1H1A105A028	C CHIP 10V 1UF	
C3036	F1H1A105A028	C CHIP 10V 1UF	
C3037	F1H1A105A028	C CHIP 10V 1UF	
C3038	F1H1A105A028	C CHIP 10V 1UF	
C3039	F1H1A105A028	C CHIP 10V 1UF	
C3040	F1H1A105A028	C CHIP 10V 1UF	
C3041	F1H1A105A028	C CHIP 10V 1UF	
C3042	F1H1A105A028	C CHIP 10V 1UF	
C3043	F1H1A105A028	C CHIP 10V 1UF	
C3044	F1H1A105A028	C CHIP 10V 1UF	
C3051	F2A1C1000035	ELECTROLYTIC 16V 10UF	
C3052	F2A1C1000035	ELECTROLYTIC 16V 10UF	
C3201	F2A1C2200034	ELECTROLYTIC 16V 22UF	
C3202	F2A1C2200034	ELECTROLYTIC 16V 22UF	
C3203	F2A1C2200034	ELECTROLYTIC 16V 22UF	
C3204	F2A1C2200034	ELECTROLYTIC 16V 22UF	
C3205	F1H1C104A008	C CHIP 16V 0.1UF	
C3207	F1H1C104A008	C CHIP 16V 0.1UF	
C3208	F1H1H2R00008	C CHIP 50V 2PF	
C3209	F1H1H2R00008	C CHIP 50V 2PF	
C3210	ECJ1VC1H180J	C CHIP 50V 18PF	
C3211	F1H1H100A735	C CHIP 50V 10PF	
C3212	ECJ1VC1H180J	C CHIP 50V 18PF	
C3213	F1H1E104A030	C CHIP 25V 0.1UF	
C3214	F1H1E104A030	C CHIP 25V 0.1UF	
C3215	F1H1E104A030	C CHIP 25V 0.1UF	
C3216	F2A1C1010047	ELECTROLYTIC 16V 100UF	
C4001	F1H1C104A008	C CHIP 16V 0.1UF	
C4002	F2A1C4700035	ELECTROLYTIC 16V 47UF	
C4003	F1H1A105A028	C CHIP 10V 1UF	
C4004	F1H1A105A028	C CHIP 10V 1UF	
C4005	F1H1A105A028	C CHIP 10V 1UF	
C4006	F1H1A105A028	C CHIP 10V 1UF	
C4007	F1H1A105A028	C CHIP 10V 1UF	
C4008	F1H1A105A028	C CHIP 10V 1UF	
C4009	F1H1A105A028	C CHIP 10V 1UF	
C4010	F1H1A105A028	C CHIP 10V 1UF	
C4011	F1H1A105A028	C CHIP 10V 1UF	
C4012	F1H1A105A028	C CHIP 10V 1UF	
C4013	F1H1A105A028	C CHIP 10V 1UF	
C4014	F1H1A105A028	C CHIP 10V 1UF	
C4015	F2A1C1000035	ELECTROLYTIC 16V 10UF	
C4016	F2A1C4700035	ELECTROLYTIC 16V 47UF	
C4017	F1H1A105A028	C CHIP 10V 1UF	
C4018	F1H1A105A028	C CHIP 10V 1UF	
C4019	F2A1C4700035	ELECTROLYTIC 16V 47UF	
C4201	F2A1C1010047	ELECTROLYTIC 16V 100UF	
C4202	F1H1H103A220	C CHIP 50V 0.01UF	
C4203	F2A1E4R70022	ELECTROLYTIC 25V 4.7UF	
C4204	F2A1E4R70022	ELECTROLYTIC 25V 4.7UF	
C4205	F2A1E4R70022	ELECTROLYTIC 25V 4.7UF	
C4206	F2A1E4R70022	ELECTROLYTIC 25V 4.7UF	
C4207	F1H1C104A041	C CHIP 16V 0.1UF	
C4208	F2A1E4R70022	ELECTROLYTIC 25V 4.7UF	
C4209	F1H1A105A028	C CHIP 10V 1UF	
C4210	F1H1C104A041	C CHIP 16V 0.1UF	
C4211	F1H1C104A041	C CHIP 16V 0.1UF	
C4212	F1H1C104A041	C CHIP 16V 0.1UF	
C4213	F1H1H472A219	C CHIP 50V 4700PF	
C4214	F1H1H472A219	C CHIP 50V 4700PF	
C4215	ECJ1VB1E333K	C CHIP 25V 0.033UF	
C4216	ECJ1VB1E333K	C CHIP 25V 0.033UF	
C4217	F1H1H332A219	C CHIP 50V 3300PF	
C4218	F1H1H332A219	C CHIP 50V 3300PF	
C4219	F2A1C1000035	ELECTROLYTIC 16V 10UF	
C4220	F2A1C1000035	ELECTROLYTIC 16V 10UF	
C4501	F1J1H104A538	C CHIP 50V 0.1UF	
C4502	F1J1H104A538	C CHIP 50V 0.1UF	
C4503	F2A1V1020056	ELECTROLYTIC 35V 1000UF	
C4504	F2A1V1020056	ELECTROLYTIC 35V 1000UF	
C4505	F2A1H1R00035	ELECTROLYTIC 50V 1UF	
C4512	ECJ2VB1H153K	C CHIP 50V 0.015UF	
C4513	ECJ2VB1H153K	C CHIP 50V 0.015UF	
C4514	F1J1H104A538	C CHIP 50V 0.1UF	
C4515	F1J1H104A538	C CHIP 50V 0.1UF	
C4516	F1J1H104A538	C CHIP 50V 0.1UF	
C4519	ECJ1VB1H182K	C CHIP 50V 0.0018UF	
C4520	ECJ1VB1H182K	C CHIP 50V 0.0018UF	
C4521	ECJ1VB1H182K	C CHIP 50V 0.0018UF	
C4522	ECJ1VB1H182K	C CHIP 50V 0.0018UF	
C4524	F1K1E105A029	C CHIP 25V 1UF	
C4525	F1K1E105A029	C CHIP 25V 1UF	
C4526	F1J1H104A538	C CHIP 50V 0.1UF	
C4527	F1K1H1050002	C CHIP 50V 1UF	
C4528	ECJ1VC1H221J	C CHIP 50V 220PF	
C4529	ECJ1VC1H221J	C CHIP 50V 220PF	
C4530	ECJ1VC1H221J	C CHIP 50V 220PF	
C4531	ECJ1VC1H221J	C CHIP 50V 220PF	
C4532	F1K1H474A091	C CHIP 50V 0.47UF	
C4533	F1K1H474A091	C CHIP 50V 0.47UF	
C4534	F1K1H2240002	C CHIP 50V 0.22UF	
C4535	F1K1H2240002	C CHIP 50V 0.22UF	
C4536	F1K1H1050002	C CHIP 50V 1UF	
C4537	ECJ1VC1H221J	C CHIP 50V 220PF	
C4538	F1K1H1050002	C CHIP 50V 1UF	
C4539	ECJ1VB1H182K	C CHIP 50V 0.0018UF	
C4540	F1H1H473A748	C CHIP 50V 0.047UF	
C4541	F1H1H473A748	C CHIP 50V 0.047UF	
C4542	ECJ1VB1H182K	C CHIP 50V 0.0018UF	
C4549	F1H1H103A219	C CHIP 50V 0.01UF	
C4550	F2A1C1010047	ELECTROLYTIC 16V 100UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L1101	G0A100YA0002	COIL 10UH	
L1102	G0A100YA0002	COIL 10UH	
L1103	G0A100YA0002	COIL 10UH	
L1104	J0JHB0000021	FILTER	
L1105	G0A100YA0002	COIL 10UH	
L1107	J0JHB0000021	FILTER	
L1108	J0JHB0000021	FILTER	
L1109	G0A100ZA0030	COIL 10UH	
L1111	G0A100ZA0030	COIL 10UH	
L1112	G0A100ZA0030	COIL 10UH	
L1113	G0A100YA0002	COIL 10UH	
L1114	G0A100YA0002	COIL 10UH	
L1115	G0A100YA0002	COIL 10UH	
L1117	G0A100YA0002	COIL 10UH	
L3001	G0C100JA0055	COIL 10UH	
L4001	G0C101JA0055	COIL 100UH	
L4201	G0C101JA0055	COIL 100UH	
L4501	J0JJC0000003	COIL	
L4502	J0JJC0000003	COIL	
L4503	G0A330ZA0030	COIL 33UH	
L4504	G0A330ZA0030	COIL 33UH	
L4505	G0A100YA0002	COIL 10UH	
L4506	G0A100YA0002	COIL 10UH	
L4515	ERJ8GEY0R00V	MGF CHIP 1/8W 0	
L4516	ERJ8GEY0R00V	MGF CHIP 1/8W 0	
L4517	ERJ8GEY0R00V	MGF CHIP 1/8W 0	
L4518	ERJ8GEY0R00V	MGF CHIP 1/8W 0	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P1101	K1KB30A00160	CONNECTOR 30P	
P1102	LSJA0542	CONNECTOR CABLE W/PLUG	
P3001	LSJA0537	CONNECTOR CABLE W/PLUG	
P3002	K1KB50A00135	CONNECTOR 50P	
P3003	K1KB65A00002	CONNECTOR 65P	
P3004	LSJA0538	CONNECTOR CABLE W/PLUG	
P3007	LSJA0548	CONNECTOR CABLE W/PLUG	
P3008	LSJA0540	CONNECTOR CABLE W/PLUG	
P4503	LSJA0541	CONNECTOR CABLE W/PLUG	

FUSE & PROTECTOR

Ref. No.	Part No.	Part Name & Description	Remarks
PR1101	D4FA3R50A002	IC PROTECTOR 3.5A	⚠
PR1102	D4FA5R00A002	IC PROTECTOR 5A	⚠
PR1103	D4FA3R50A002	IC PROTECTOR 3.5A	⚠

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
483	XYN3+K10FJ	SCREW W/WASHER,STEEL	
750	VZFS0006	CLAMPER	
751	J0KA00000044	FERITE CORE	
759	LSSC0768	HEAT SINK	

15.5.4. POWER C.B.A.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC1001	C5HABZZ00131	IC, HYBRID	⚠ E.S.D.
IC1002	CNC1S101R1KT	IC, LINEAR	⚠
or IC1002	CNC1S101S1KT	IC, LINEAR	⚠
IC1003	C0DAEMZ00007	IC, LINEAR	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q801	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q801	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1001	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q1001	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1002	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q1002	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1003	B1BDCG000014	TRANSISTOR SI PNP CHIP	
or Q1003	B1BDCG000015	TRANSISTOR SI PNP CHIP	
Q1004	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q1004	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1005	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q1005	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1006	B1BDCG000014	TRANSISTOR SI PNP CHIP	
or Q1006	B1BDCG000015	TRANSISTOR SI PNP CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D801	ERZV10V361CS	SURGE ABSORBER	⚠
D803	MA2Q73600L	DIODE SI CHIP	
or D803	B0JCMC000002	DIODE SI CHIP	
D804	MA2Q73600L	DIODE SI CHIP	
or D804	B0JCMC000002	DIODE SI CHIP	
D805	MA2Q73600L	DIODE SI CHIP	
or D805	B0JCMC000002	DIODE SI CHIP	
D806	MA2Q73600L	DIODE SI CHIP	
or D806	B0JCMC000002	DIODE SI CHIP	
D807	B0HAGP000012	DIODE SI	
or D807	B0HAJL000001	DIODE SI	
D808	B0HAGP000012	DIODE SI	
or D808	B0HAJL000001	DIODE SI	
D809	MA2C16700E	DIODE SI	
D810	MA2C16700E	DIODE SI	
D811	MA2Q73600L	DIODE SI CHIP	
or D811	B0JCMC000002	DIODE SI CHIP	
D812	MA2Q73600L	DIODE SI CHIP	
or D812	B0JCMC000002	DIODE SI CHIP	
D813	MAZ40510MF	DIODE ZENER 5.1V	
D1001	MAZ41500MF	DIODE ZENER 15V	
D1002	B0EBNT000008	DIODE SI	⚠
D1003	MAZ41500MF	DIODE ZENER 15V	
D1005	B0HAMM000083	DIODE SI	
D1006	MAZ4100NHF	DIODE ZENER 10V	
D1007	B0HAMM000083	DIODE SI	
D1008	MAZ40620MF	DIODE ZENER 6.2V	
D1009	B0HAHP000014	DIODE SI	
or D1009	B0HAJP000007	DIODE SI	
or D1009	B0HAMP000061	DIODE SI	
D1010	B0HAHP000014	DIODE SI	
D1011	B0HAMM000083	DIODE SI	
D1012	B0HAMM000083	DIODE SI	
D1013	B0HAHP000014	DIODE SI	
D1014	B0HAMM000083	DIODE SI	
D1015	B0HBRM000028	DIODE SI	
D1016	B0JBSG000030	DIODE SI	
D1017	B0HBRM000028	DIODE SI	
D1018	B0HAMR000063	DIODE SI	
or D1018	B0EALR000005	DIODE SI	
D1019	B0HAHP000014	DIODE SI	
D1020	MAZ73000BC	DIODE ZENER 300V	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R801	VRESC2TK825T	SOLID 1/2W 8.2M	⚠
R805	ERDS2TJ102	CARBON 1/4W 1K	
R806	ERDS2TJ102	CARBON 1/4W 1K	
R807	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R808	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R809	D1F5100E0002	W FLMPRF 5W 10	⚠
R810	ERDS1TJ271T	CARBON 1/2W 270	
R811	D1F5100E0002	W FLMPRF 5W 10	⚠
R812	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R813	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1001	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R1002	ERJ6GEYJ122V	MGF CHIP 1/10W 1.2K	
R1003	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R1004	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R1005	ERDS2TJ272	CARBON 1/4W 2.7K	
R1006	ERDS2TJ272	CARBON 1/4W 2.7K	
R1007	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R1008	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R1009	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R1010	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R1011	ERDS2TJ272	CARBON 1/4W 2.7K	
R1012	ERDS2TJ272	CARBON 1/4W 2.7K	
R1013	ERG2SJ104H	METAL OXIDE 2W 100K	
R1014	ERDS2TJ101	CARBON 1/4W 100	
R1015	ERX2SJR27P	METAL FILM 2W 0.27	
R1016	ERX2SJR22P	METAL FILM 2W 0.22	
R1017	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R1018	ERG3SJ473H	METAL OXIDE 3W 47K	
R1019	ERJ6GEYJ183V	MGF CHIP 1/10W 18K	
R1020	ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	
R1021	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R1022	ERD25FJ3R3P	CARBON 1/4W 3.3	⚠
R1023	ERDS1TJ750T	CARBON 1/2W 75	
R1025	ERD25FJ100P	CARBON 1/4W 10	⚠
R1026	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R1027	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R1028	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R1029	ERDS1TJ122T	CARBON 1/2W 1.2K	
R1030	ERG1SJ182E	METAL OXIDE 1W 1.8K	
R1031	ERG1SJ182E	METAL OXIDE 1W 1.8K	
R1032	D0HD223ZA002	MGF CHIP 1/10W 22K	
R1033	D0HD472ZA002	MGF CHIP 1/10W 4.7K	
R1034	D0HD103ZA002	MGF CHIP 1/10W 10K	
R1035	ERG3SJ473H	METAL OXIDE 3W 47K	
R1036	ERG1SJ681E	METAL OXIDE 1W 680	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C802	ECQU2A474MLA	POLYESTER 250V 0.47UF	⚠

Ref. No.	Part No.	Part Name & Description	Remarks
C804	ECA1CHG102B	ELECTROLYTIC 16V 1000UF	
C805	ECA1EHG102B	ELECTROLYTIC 25V 1000UF	
C806	ECQU2A474MLA	POLYESTER 250V 0.47UF	⚠
C808	F1BAF102A087	CERAMIC 250V 1000UF	⚠
C809	F1BAF102A087	CERAMIC 250V 1000UF	⚠
C811	ECQU2A474MLA	POLYESTER 250V 0.47UF	⚠
C813	ECKATS472MF	CERAMIC 250V 4700PF	⚠
or C813	ECKETS472MF	CERAMIC 250V 4700PF	⚠
C814	F1J1H103A702	C CHIP 50V 0.01UF	
C1001	ECQU2A823MLA	POLYESTER 250V 0.082UF	⚠
C1002	F2A1E4710044	ELECTROLYTIC 25V 470UF	
C1003	F1J1E1040007	C CHIP 25V 0.1UF	
C1004	F1BAF102A087	CERAMIC 250V 1000UF	⚠
C1005	F2B2D8210021	ELECTROLYTIC 200V 820UF	⚠
C1006	F2A1E4710044	ELECTROLYTIC 25V 470UF	
C1007	F1J1E1040007	C CHIP 25V 0.1UF	
C1008	F1J1H102A623	C CHIP 50V 1000PF	
C1009	F1J1H102A623	C CHIP 50V 1000PF	
C1010	F1B3D471A011	CERAMIC 2KV 470PF	
C1011	ECA1HHG010B	ELECTROLYTIC 50V 1UF	
C1012	F1J1H1040003	C CHIP 50V 0.1UF	
C1013	F1J1H103A702	C CHIP 50V 0.01UF	
C1014	ECKN3A221KBP	CERAMIC 1KV 220PF	
C1015	F1J1H470A411	C CHIP 50V 47PF	
C1016	F2A1V1010029	ELECTROLYTIC 35V 100UF	
C1017	F2A1V1010029	ELECTROLYTIC 35V 100UF	
C1018	ECA2EHG4R7B	ELECTROLYTIC 25V 4.7UF	
C1019	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C1025	F2A1V1020056	ELECTROLYTIC 35V 1000UF	
C1026	F2A1V1020056	ELECTROLYTIC 35V 1000UF	
C1028	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C1029	F2A1C3920011	ELECTROLYTIC 16V 3900UF	
C1030	F1J1C474A104	C CHIP 16V 0.47UF	
C1031	F2A1C3920011	ELECTROLYTIC 16V 3900UF	
C1032	F2A1E4710070	ELECTROLYTIC 25V 470UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L802	G0B332J00003	LINE FILTER	⚠
L803	J0HBJJ000030	FILTER FOR EMI/EMC	⚠
L1001	G0B452H00002	LINE FILTER	⚠
L1003	J0JKA0000015	COIL	
L1004	J0JHB0000021	FILTER	
L1005	J0JHB0000021	FILTER	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P804	K1KA02A00593	CONNECTOR 2P	
P807	LSJA0546	CONNECTOR CABLE W/PLUG	
P1001	LSJA0547	CONNECTOR CABLE W/PLUG	
P1006	K1KA30B00072	CONNECTOR 30P	

FUSE & PROTECTOR

Ref. No.	Part No.	Part Name & Description	Remarks
F801	K5D632BNA005	FUSE 125V/250V 6.3A	⚠
F1001	K5D502BNA005	FUSE 125V/250V 5A	⚠
PR1001	D4FA1R000003	IC PROTECTOR 1A	⚠
PR1002	D4FA10R00002	IC PROTECTOR 10A	⚠
PR1003	D4FA7R00A002	IC PROTECTOR 7A	⚠
PR1004	D4FA7R00A002	IC PROTECTOR 7A	⚠
PR1005	D4FA10R00002	IC PROTECTOR 10A	⚠

RELAY

Ref. No.	Part No.	Part Name & Description	Remarks
RL801	K6B1AGA00093	RELAY	⚠
RL802	K6B1AGA00093	RELAY	⚠

TRANSFORMER

Ref. No.	Part No.	Part Name & Description	Remarks
T801	ETP28KBZA1QG	TRANSFORMER	⚠
T1001	ETS39AG455ND	TRANSFORMER	⚠

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
83	TMM5439-1	CLAMPER	
412	XNG3BFN	NUT,STEEL	
417	XYN3+K10FN	SCREW W/WASHER,STEEL	
721	EYF52BCY	FUSE HOLDER	
722	LSSC0724	HEAT SINK	
723	LSSC0767	HEAT SINK	
724	LSSC0766	HEAT SINK	
735	LSSC0630	HEAT SINK	

15.5.5. REAR JACK C.B.A.

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R3501	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3502	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3503	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3504	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3505	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3506	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3507	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3508	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3509	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3510	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3511	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3512	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3513	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3514	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3515	ERJ3EKF75R0V	MGF CHIP 1/16W 75	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L3501	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3502	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3503	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3504	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3505	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3506	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3507	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3508	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3509	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3510	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3511	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3512	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3513	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3514	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3515	ERJ3GEY0R00V	MGF CHIP 1/16W 0	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P3501	K1KA50B00094	CONNECTOR 50P	

JACKS

Ref. No.	Part No.	Part Name & Description	Remarks
JK3501	K1U824A00001	S-JACK SOCKET	
JK3502	K2HA306A0028	AUDIO/VIDEO JACK SOCKET	
JK3503	K2HA510A0001	AUDIO/VIDEO JACK SOCKET	
JK3504	K2HA510A0001	AUDIO/VIDEO JACK SOCKET	
JK3505	K2HA510A0001	AUDIO/VIDEO JACK SOCKET	

15.5.6. FRONT JACK C.B.A.

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q3901	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q3901	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q3902	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q3902	B1ABCF000020	TRANSISTOR SI NPN CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D3901	B0BD6R200004	DIODE ZENER CHIP 6.2V	
D3902	B3AAA0000538	LIGHT EMITTING DIODE RED	
D3903	B3AAA0000538	LIGHT EMITTING DIODE RED	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R3901	ERA3YHD750V	MGF CHIP 1/16W 75	
R3902	ERA3YHD750V	MGF CHIP 1/16W 75	
R3903	ERA3YHD750V	MGF CHIP 1/16W 75	
R3904	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R3905	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3906	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3907	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R3908	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3909	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3910	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R3911	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3912	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3913	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3914	ERJ3GEYJ101V	MGF CHIP 1/16W 100	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C3901	F2A0J4700014	ELECTROLYTIC 6.3V 47UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L3901	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3902	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3903	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3904	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3905	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3906	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3907	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3908	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3909	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L4801	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L4802	ERJ3GEY0R00V	MGF CHIP 1/16W 0	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P3901	K1KA10BA0062	CONNECTOR 10P	
P3902	K1KA12BA0062	CONNECTOR 12P	
P3903	K1KA05BA0061	CONNECTOR 5P	

JACKS

Ref. No.	Part No.	Part Name & Description	Remarks
JK3901	K1FB115A0015	D-SUB MINI JACK SOCKET	
JK3902	K1U412A00008	AUDIO/VIDEO/S-VIDEO JACK SOCKET	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
711	PNA4618M14VT	INFRARED RECEIVER UNIT	

15.5.7. CARD C.B.A.

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R9001	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9002	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9003	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9004	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9005	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9006	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9007	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9008	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9069	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9070	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9071	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9072	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9073	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9074	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9075	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9076	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9078	ERJ3GEY0R00V	MGF CHIP 1/16W 0	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C9016	EEE0JA470SR	ELECTROLYTIC 6.3V 47UF	
C9021	F1H1C104A008	C CHIP 16V 0.1UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L9003	J0JHC0000018	COIL CHIP 42UH	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P9003	K1KA12A00326	CONNECTOR 12P	
P9005	K1NA09E00060	SD UNIT	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
479	XYE3+FJ8FN	SCREW W/WASHER,STEEL	
709	LSSC0776	CARD SHIELD CASE BOTTOM,STEEL	
710	LSSC0775	CARD SHIELD CASE TOP,STEEL	

15.5.8. BALLAST C.B.A. NR

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC1302	CNC1S101R1KT	IC, LINEAR	⚠
or IC1302	CNC1S101S1KT	IC, LINEAR	⚠
IC1303	CNC1S101R1KT	IC, LINEAR	⚠
or IC1303	CNC1S101S1KT	IC, LINEAR	⚠
IC1304	CNC1S101R1KT	IC, LINEAR	⚠
or IC1304	CNC1S101S1KT	IC, LINEAR	⚠

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q1301	2SB1219ARL	TRANSISTOR SI PNP CHIP	
Q1302	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q1302	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1304	B1DEGQ000044	TRANSISTOR FET	
Q1305	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q1305	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1306	B1DEGQ000044	TRANSISTOR FET	
Q1307	B1DEGQ000044	TRANSISTOR FET	
Q1308	B1DEGQ000044	TRANSISTOR FET	
Q1309	B1DEGQ000044	TRANSISTOR FET	
Q1310	B1DFCQ000007	TRANSISTOR FET	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D1302	B0EBNT000008	DIODE SI	⚠
D1303	B0ECKP000033	DIODE SI CHIP	
D1304	B0ECKP000033	DIODE SI CHIP	
D1305	MAZ727000C	DIODE ZENER 2.7V	
D1306	B0ECKP000033	DIODE SI CHIP	
D1307	MA2Q73600L	DIODE SI CHIP	
or D1307	B0JCMC000002	DIODE SI CHIP	
D1308	B0FABR000003	DIODE SI	
D1309	B0ECKP000033	DIODE SI CHIP	

Ref. No.	Part No.	Part Name & Description	Remarks
D1310	B0ECKP000033	DIODE SI CHIP	
D1311	MAZ727000C	DIODE ZENER 2.7V	
D1313	MAZ727000C	DIODE ZENER 2.7V	
D1315	B2ZAZ0000020	DIODE SI	
D1316	MA2J111008	DIODE SI CHIP	
or D1316	B0ACCK000005	DIODE SI CHIP	
or D1316	MA2J11100L	DIODE SI CHIP	
D1317	MA2J111008	DIODE SI CHIP	
or D1317	B0ACCK000005	DIODE SI CHIP	
or D1317	MA2J11100L	DIODE SI CHIP	
D1318	MAZ727000C	DIODE ZENER 2.7V	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R1301	ERDS1FJ474T	CARBON 1/2W 470K	⚠
R1306	ERJ6GEYJ822V	MGF CHIP 1/10W 8.2K	
R1307	ERJ8GEYJ822V	MGF CHIP 1/8W 8.2K	
R1308	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1309	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R1310	ERJ12YJ753H	MGF CHIP 1/2W 75K	
R1311	ERJ12YJ753H	MGF CHIP 1/2W 75K	
R1312	ERJ12YJ753H	MGF CHIP 1/2W 75K	
R1313	ERJ12YJ753H	MGF CHIP 1/2W 75K	
R1314	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R1316	ERX2SJR47E	METAL FILM 2W 0.47	
R1317	ERX2SJR47E	METAL FILM 2W 0.47	
R1318	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1319	ERJ12YJ100H	MGF CHIP 1/2W 10	
R1320	ERJ12YJ101H	MGF CHIP 1/2W 100	
R1321	EVMAASA00B52	VARIABLE 500	
R1322	ERX2SJR33E	METAL FILM 2W 0.33	
R1323	ERX2SJR47E	METAL FILM 2W 0.47	
R1324	ERJ14YJ471H	MGF CHIP 1/4W 470	
R1325	ERJ14NF3902H	MGF CHIP 1/4W 39K	
R1326	ERJ14NF3902H	MGF CHIP 1/4W 39K	
R1328	ERJ6GEYJ823V	MGF CHIP 1/10W 82K	
R1329	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R1330	ERJ14YJ680H	MGF CHIP 1/4W 68	
R1331	ERJ14YJ680H	MGF CHIP 1/4W 68	
R1332	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1333	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1334	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1335	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1336	ERJ14YJ680H	MGF CHIP 1/4W 68	
R1337	ERJ14YJ680H	MGF CHIP 1/4W 68	
R1338	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1339	ERG3SJ123	METAL OXIDE 3W 12K	
R1340	ERG3SJ123	METAL OXIDE 3W 12K	
R1341	ERJ6GEYJ681V	MGF CHIP 1/10W 680	
R1342	ERJ14YJ222H	MGF CHIP 1/4W 2.2K	
R1343	ERJ6GEYJ681V	MGF CHIP 1/10W 680	
R1344	ERJ14YJ471H	MGF CHIP 1/4W 470	
R1345	ERG1SJ100E	METAL OXIDE 1W 10	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C1301	ECQU2A474MLA	POLYESTER 250V 0.47UF	⚠
C1302	ECQU2A474MLA	POLYESTER 250V 0.47UF	⚠
C1303	F1J1H103A702	C CHIP 50V 0.01UF	
C1304	F1J1H222A623	C CHIP 50V 2200PF	
C1305	F2B2T1220001	ELECTROLYTIC 220V 1200UF	⚠
C1306	F2B2T1220001	ELECTROLYTIC 220V 1200UF	⚠
C1307	F1BAF102A087	CERAMIC 250V 1000UF	⚠
C1309	ECQE4104KF	POLYESTER 400V 0.1UF	
C1310	ECQE4104KF	POLYESTER 400V 0.1UF	
C1311	ECQE4125KF	POLYESTER 400V 1.2UF	
C1312	F1A3A271A028	CERAMIC 1KV 270PF	
C1316	ECQE4125KF	POLYESTER 400V 1.2UF	
C1317	ECEA1HGE220B	ELECTROLYTIC 50V 22UF	
C1319	F1K2J1030001	CERAMIC 630V 0.01UF	
C1320	F2A1E1210010	ELECTROLYTIC 25V 120UF	
C1321	F2A1E1210010	ELECTROLYTIC 25V 120UF	
C1322	F1K2J221A005	CERAMIC 630V 220PF	
C1323	F1K2J102A006	CERAMIC 630V 1000PF	
C1324	F1K2J102A006	CERAMIC 630V 1000PF	
C1325	F1K2J221A005	CERAMIC 630V 220PF	
C1326	F1J1H562A623	C CHIP 50V 5600PF	
C1327	F1J1H562A623	C CHIP 50V 5600PF	
C1328	F0C3C392A026	POLYESTER 1KV 3900PF	
C1329	F1J1H562A623	C CHIP 50V 5600PF	
C1330	F0CAH104A001	POLYESTER 450V 0.1UF	
C1331	ECJ2VB1E103K	C CHIP 25V 0.01UF	
C1332	ECJ2VB1E103K	C CHIP 25V 0.01UF	
C1333	F1A3A271A028	CERAMIC 1KV 270PF	
C1334	F1B3D222A010	CERAMIC 25V 2200PF	
C1335	F1A3A271A028	CERAMIC 1KV 270PF	
C1336	F1J1E1040007	C CHIP 25V 0.1UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L1301	ELF20N030A	LINE FILTER	⚠
L1302	J0JHB0000021	FILTER	
L1303	G0B100E00001	LINE FILTER	
L1304	J0JHB0000021	FILTER	
L1305	J0KA00000020	BEADS CORE	
L1306	G0A601J00011	COIL 600UH	
L1307	G0C470KA0030	COIL 47UH	
L1308	J0JHB0000021	FILTER	
L1309	J0JHB0000021	FILTER	
L1310	G0ZZ00002195	OTHER FIXED COILS,LEAD TYPE	
L1311	G0ZZ00002462	COIL	
L1312	J0JHB0000021	FILTER	
L1313	J0JHB0000021	FILTER	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P1301	K1KA05BA0034	CONNECTOR 5P	
P1302	K1KA02B00251	CONNECTOR 2P	
P1305	K1KA04BA0061	CONNECTOR 4P	
P1306	K1KA02B00230	CONNECTOR 2P	

FUSE & PROTECTOR

Ref. No.	Part No.	Part Name & Description	Remarks
F1301	K5D502BNA005	FUSE 125V/250V 5A	⚠
F1302	K5C117BC0003	THERMAL FUSE TF117C 250V 2A	⚠

TRANSFORMER

Ref. No.	Part No.	Part Name & Description	Remarks
T1301	EULSPJ004A	TRANSFORMER	⚠

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
83	TMM5439-1	CLAMPER	
411	XYE3+FF8FN	SCREW W/WASHER,STEEL	
412	XNG3BFN	NUT,STEEL	
417	XYN3+K10FN	SCREW W/WASHER,STEEL	
447	XYN3+K8FN	SCREW W/WASHER,STEEL	
452	XTV3+8FFN	TAPPING SCREW,STEEL	
463	XYN3+F12FN	SCREW W/WASHER,STEEL	
721	EYF52BCY	FUSE HOLDER	
731	LSSC0777	BALLAST SHIELD CASE BOTTOM,STEEL	
732	LSSC0778	BALLAST SHIELD CASE TOP,STEEL	
733	KGLS-10RT	CLAMPER	
734	KGPS-6RFV0	RIVET	
735	LSSC0630	HEAT SINK	
736	LSSC0629	HEAT SINK	
737	LSSC0627	HEAT SINK	
738	LSSC0631	HEAT SINK	
739	LSSC0628	HEAT SINK	

Ref. No.	Part No.	Part Name & Description	Remarks
740	LSSC0632	HEAT SINK	
741	LSSC0633	HEAT SINK	
742	LSMZ0400	BALLAST BARRIER	

15.5.9. OPERATION C.B.A.

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q6701	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q6701	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q6701	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q6702	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q6702	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q6702	B1ADCF000075	TRANSISTOR SI PNP CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D6701	B3AGA0000072	LIGHT EMITTING DIODE GREEN	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R6702	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R6703	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R6704	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	
R6705	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R6706	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R6707	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R6708	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6709	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6710	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R6711	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6712	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6713	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P6701	K1KA07BA0061	CONNECTOR 7P	

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW6701	EVQ11G05R	SWITCH PUSH	
SW6702	EVQ11G05R	SWITCH PUSH	
SW6703	EVQ11G05R	SWITCH PUSH	
SW6704	EVQ11G05R	SWITCH PUSH	
SW6705	EVQ11G05R	SWITCH PUSH	
SW6706	EVQ11G05R	SWITCH PUSH	
SW6707	EVQ11G05R	SWITCH PUSH	
SW6708	EVQ11G05R	SWITCH PUSH	

15.5.10. THERMISTOR 1 C.B.A.

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R2811	D4CA35030002	THERMISTER	⚠ PSEC

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P2811	K1KA02AA0182	CONNECTOR 2P	PSEC

15.5.11. THERMISTOR 2 C.B.A.

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R2821	D4CE31330001	THERMISTOR	⚠ PSEC

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P2821	K1KA02AA0300	CONNECTOR 2P	PSEC

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
750	VZFS0006	CLAMPER	PSEC
752	LSLQ0307	FERRITE CORE	PSEC
762	LSJA0533	CONNECTOR CABLE W/PLUG	PSEC

15.5.12. COVER SWITCH C.B.A.

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P2912	LSJA0551	CONNECTOR CABLE W/PLUG	PSEC

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW2911	K0L1BA000114	SWITCH	PSEC

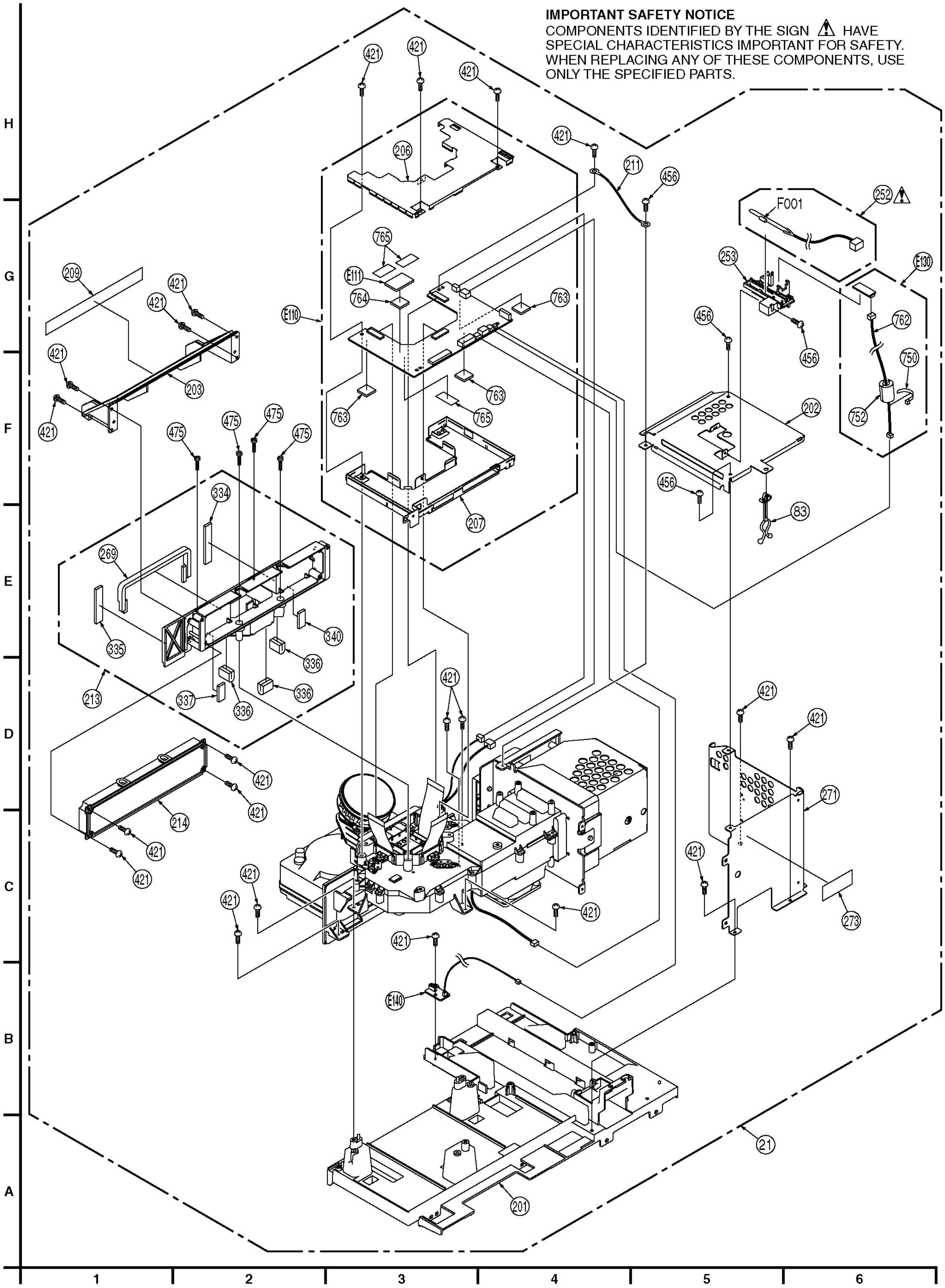
16 EXPLODED VIEWS (PROJECTION SECTION)

16.1. PROJECTION SECTION (1)

❶ PROJECTION SECTION (1)

Note: Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.

IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.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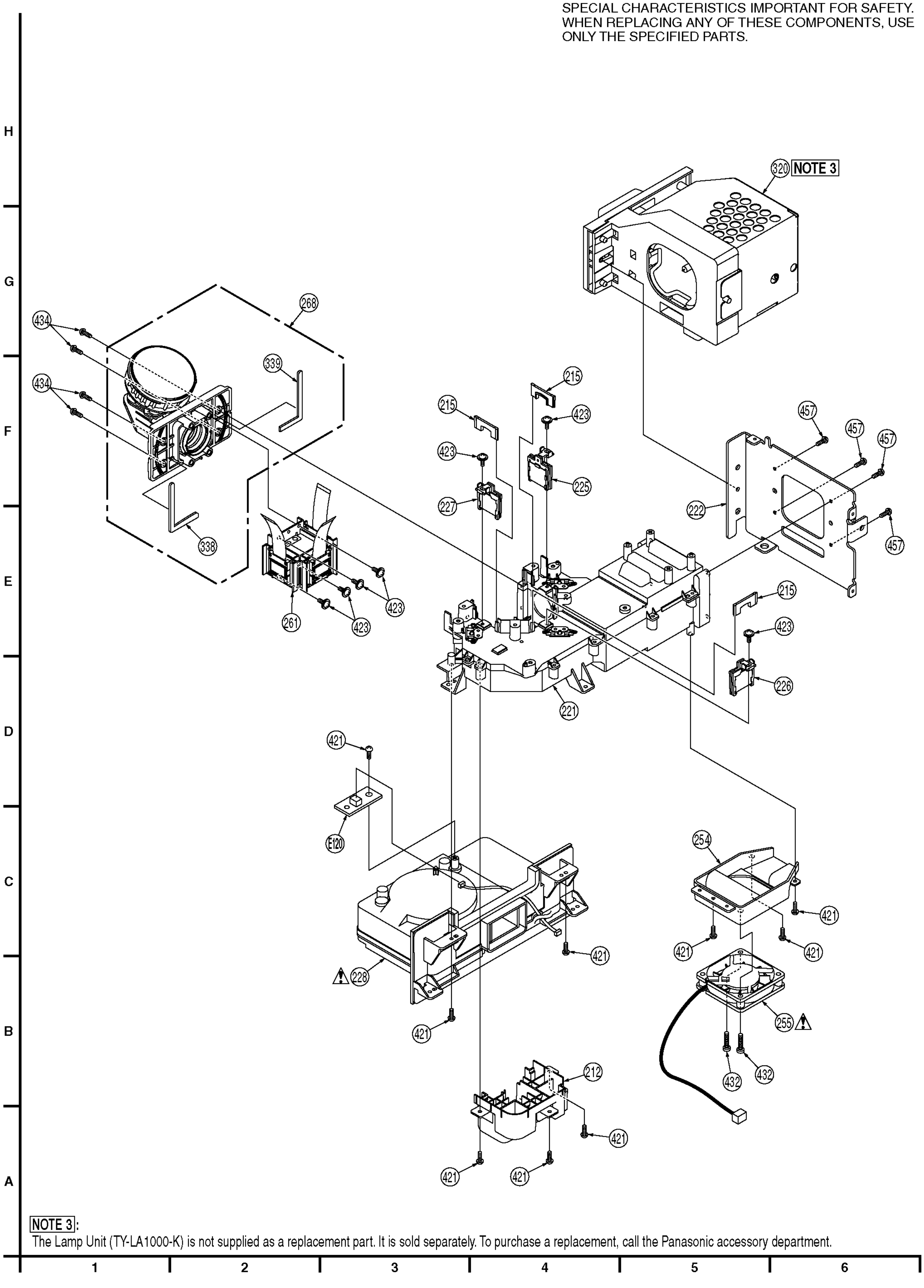
16.2. PROJECTION SECTION (2)

❷ PROJECTION SECTION (2)

IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.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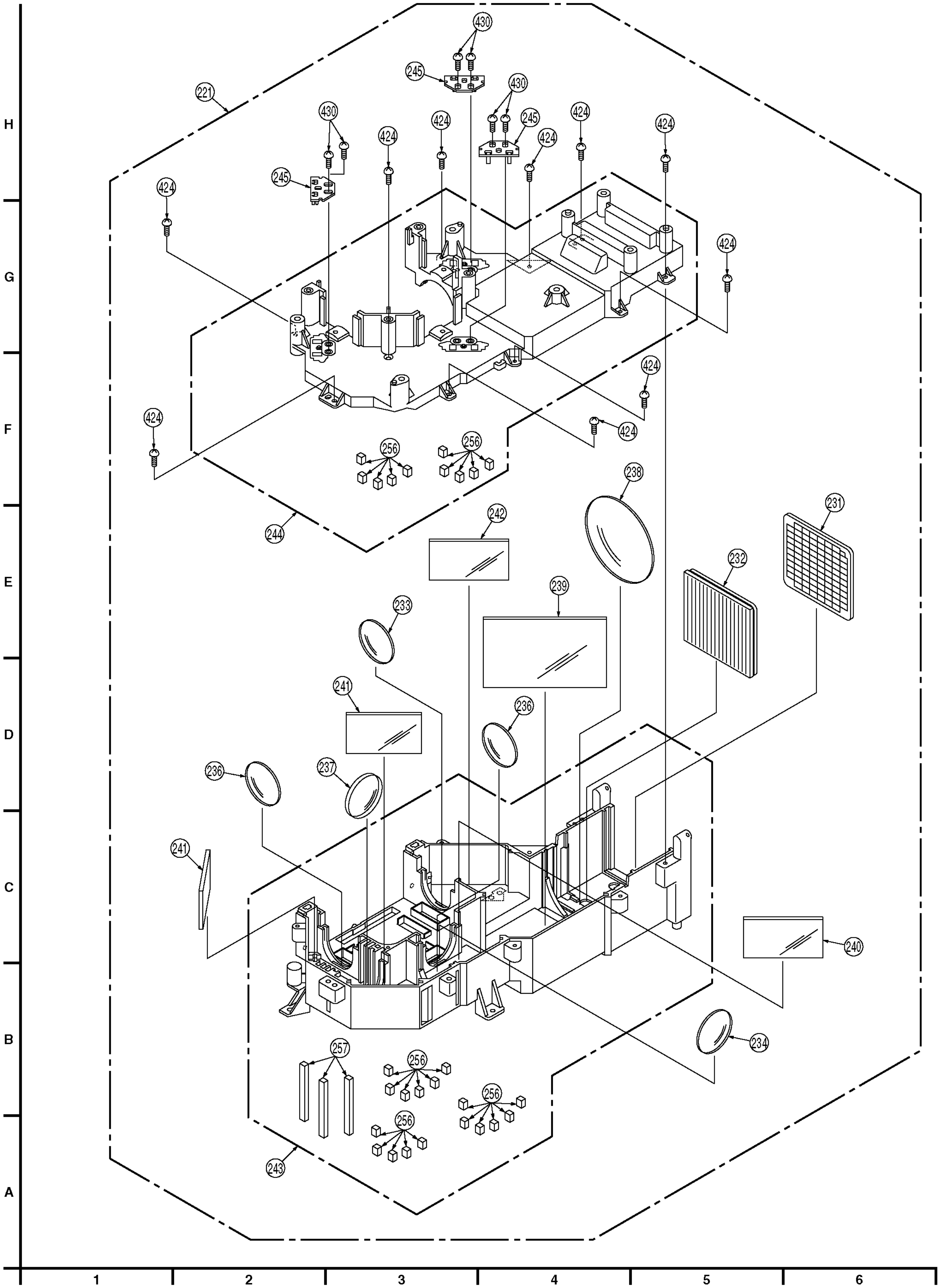
NOTE 3:
The Lamp Unit (TY-LA1000-K) is not supplied as a replacement part. It is sold separately. To purchase a replacement, call the Panasonic accessory department.

16.3. PROJECTION SECTION (3)

❸ PROJECTION SECTION (3)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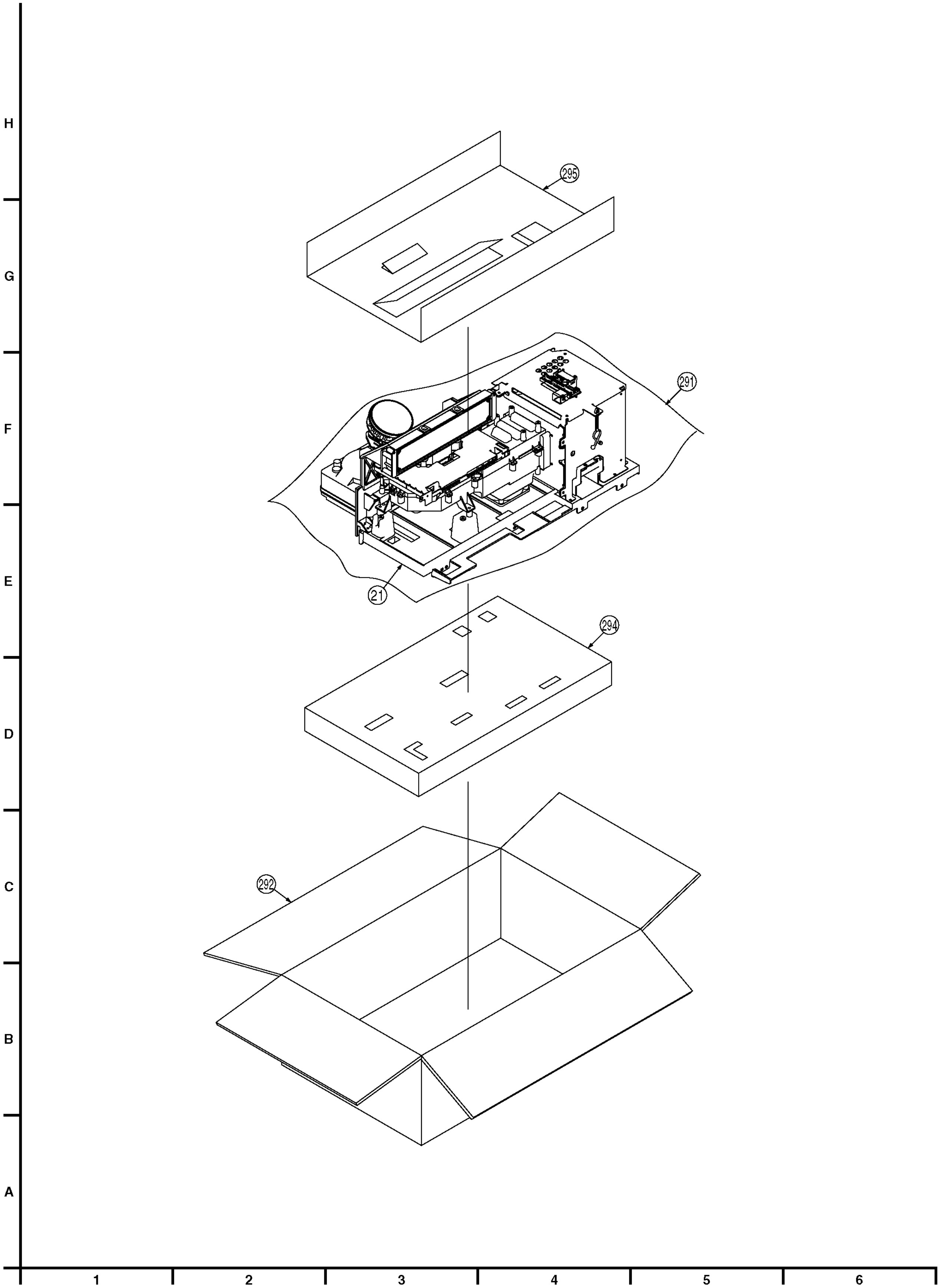
16.4. PROJECTION SECTION (4)

❹ PROJECTION SECTION (4)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17 REPLACEMENT PARTS LIST (PROJECTION SECTION)

BEFORE REPLACING PARTS, READ THE FOLLOWING:

17.1. REPLACEMENT NOTES

17.1.1. General Notes

1. Use only original replacement parts:

   To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list.

2. **IMPORTANT SAFETY NOTICE**

   Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components, use only the specified parts.

3. SPECIAL NOTE

   All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.

4. Parts with no Ref. No. in "EXPLODED VIEWS" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
5. Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.
6. Definition of Parts supplier:
   a. All parts are supplied from PSEC.
7. Item numbers with capital letter E (Example: E10, E20,...) in the Ref. No. column are shown in the exploded views.
8. Parts whose Ref. Nos. are the same are interchangeable as replacement parts. Any of these parts may be ordered and used as a replacement part.

17.1.2. Mechaniacl Replacement Notes

1. Section No. of parts shown in Exploded Views are indicated in the Remarks column.
2. Abbreviation

   RTL: Retention Time Limited

   This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.

3. After replacing the LCD/Prism Unit (Ref. No. 261), be sure to perform the following adjustment in order.
   a. Full Mirror Adjustment
   b. Polarizer Adjustment
   c. VCOM Adjustment
   d. Gamma Adjustment
   e. White Balance Adjustment
   f. Non-uniformity color correction

   For above adjustments, refer to "ADJUSTMENT PROCEDURES 2."

4. After replacing the Polarizer Red Unit (Ref. No. 225), the Polarizer Green Unit (Ref. No. 226), or the Polarizer Blue Unit (Ref. No. 227), be sure to perform the "POLARIZER ADJUSTMENT" in ADJUSTMENT PROCEDURES 2 section.

17.1.3. Electrical Replacement Notes

1. Unless otherwise specified;

   All resistors are in Ω, K = 1,000 Ω, M = 1,000 kΩ.

2. Abbreviation

RTL:	Retention Time Limited This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
NR:	Non Repairable Board Ass´y
MGF CHIP:	Metal Glaze Film Chip
C CHIP:	Ceramic Chip
COMPLX CMP:	Complex Component
W FLMPRF:	Wirewound Flameproof
C.B.A.:	Circuit Board Assembly
P.C.B.:	Printed Circuit Board
E.S.D.:	Electrostatically Sensitive Devices

3. When replacing 0 Ω resistor, a wire can be substituted for it.
4. Parts with mark "CSP" in the Remarks column are CSP (Chip Size Package) IC.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PT-44LCX65-K	A
PT-52LCX65-K	B
PT-61LCX65-K	C

17.2. MECHANICAL REPLACEMENT PARTS LIST

Definition of Parts supplier:

1. **All parts are supplied from PSEC.**

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PT-44LCX65-K	A
PT-52LCX65-K	B
PT-61LCX65-K	C

MECHANICAL REPLACEMENT PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
21	LSXA0625-HB	PROJECTION UNIT (A)	1,4 RTL
21	LSXA0626-HB	PROJECTION UNIT (B)	1,4 RTL
21	LSXA0699-HB	PROJECTION UNIT (C)	1,4 RTL
83	TMM5439-1	CLAMPER	1
201	LSMP0479	ENGINE FRAME	1
202	LSMA0738	LAMP ROOF	1
203	LSXA0657	TOP DUCT 2 UNIT	1
206	LSSC0769	LCD DRIVE SHIELD CASE TOP,STEEL	1
207	LSSC0770	LCD DRIVE SHIELD CASE BOTTOM,STEEL	1
209	LSMF0299	SEAL TAPE 4	1
211	LSJA0413	GROUNDING WIRE	1
212	LSXA0601	DUCT UNIT	2
213	LSXA0648	TOP DUCT 1 UNIT	1
214	LSMP0478	FILTER CASE UNIT	1
215	LSXA0609	JOINT PIECE UNIT	2
221	LSXA0646	OPTICAL BLOCK UNIT	2,3
222	LSMA0739	LAMP STAY PLATE,STEEL	2
225	LSXA0598	POLARIZER RED UNIT	2
226	LSXA0599	POLARIZER GREEN UNIT	2
227	LSXA0656	POLARIZER BLUE UNIT	2
228	LSMP0482	FAN CASE	2 ⚠
231	LSDL0251	INTEGRATOR	3
232	LSDL0282	P/S CONVERTOR UNIT	3
233	LSDL0253	FIELD LENS RED	3
234	LSDL0254	FIELD LENS GREEN	3
236	LSDL0256	RELAY LENS 1	3
237	LSDL0257	RELAY LENS 2	3
238	LSDL0258	CONDENSER LENS	3
239	LSDL0259	DICHROIC MIRROR RED	3
240	LSDL0260	DICHROIC MIRROR GREEN	3
241	LSDL0264	FULL MIRROR BLUE	3
242	LSDL0262	FULL MIRROR RED	3
243	LSXA0596	OPTICAL BOTTOM UNIT	3
244	LSXA0597	OPTICAL TOP UNIT	3
245	LSMA0551	MIRROR HOLDER	3
252	LSJA0464	THERMAL FUSE UNIT	1 ⚠
253	LSMP0420	SENSOR HOLDER	1
254	LSMP0419	LAMP DUCT	2
255	L6FAKCDH0007	FAN 2	2 ⚠
256	LSMF0055	CUSHION,URETHANE	3
257	LSMF0068	CUSHION,URETHANE	3
261	LSVQ0093	LCD/PRISM UNIT	2
268	LSXA0643	PROJECTION LENS (A)	2
268	LSXA0644	PROJECTION LENS (B)	2
268	LSXA0645	PROJECTION LENS (C)	2
269	LSMF0387	TOP DUCT 1 SPONGE 3	1
271	LSMA0677	LAMP WALL	1
273	LSQL1524	FUSE LABEL	1
291	LSPF0090	BAG,POLYETHYLENE	4
292	LSPG1971	PACKING CASE,PAPER (A)	4
292	LSPG1972	PACKING CASE,PAPER (B)	4
292	LSPG2061	PACKING CASE,PAPER (C)	4
294	LSPN0590	BOTTOM PAD	4
295	LSPN0591	TOP PAD	4
334	LSMF0385	TOP DUCT 1 SPONGE 1	1
335	LSMF0386	TOP DUCT 1 SPONGE 2	1
336	LSMF0264	TOP DUCT 1 SPONGE 4	1
337	LSMF0388	TOP DUCT 1 SPONGE 5	1
338	LSMF0333	PROJECTION LENS SPONGE 1	2
339	LSMF0334	PROJECTION LENS SPONGE 2	2
340	LSMF0406	TOP DUCT 1 SPONGE 6	1
421	XTV3+8GFJ	TAPPING SCREW,STEEL	1,2
423	XYN26+K8FJK	SCREW W/WASHER,STEEL	2
424	XTN26+10GFJ	TAPPING SCREW,STEEL	3
430	XST26+4FJK	SCREW,STEEL	3
432	XTV3+25GFJ	TAPPING SCREW,STEEL	2
434	XYN3+F10FJ	SCREW W/WASHER,STEEL	2
456	XTV3+6FFJ	TAPPING SCREW,STEEL	1
457	XTS3+10GFJ	TAPPING SCREW,STEEL	2
475	XSN3+20FJ	SCREW,STEEL	1
750	VZFS0006	CLAMPER	1
752	LSLQ0307	FERRITE CORE	1
762	LSJA0533	CONNECTOR CABLE W/PLUG	1
763	LSMG0141	THERCOON SHEET	1
764	VMTS0059	CUSHION,RUBBER	1
765	VMFS0213	SHEET	1
E110	LSXA0625FL	LCD DRIVE C.B.A.	1 RTL
E111	LSEP3185A	LCD DRIVE CHILD C.B.A.	1 RTL
E120	LSEP3166A	THERMISTOR 1 C.B.A.	2 RTL
E130	LSEB3137A	THERMISTOR 2 C.B.A.	1 RTL
E140	LSEP3160A	COVER SWITCH C.B.A.	1 RTL

17.3. OPTIONAL ACCESSORY REPLACEMENT PARTS LIST

17.3.1. LAMP UNIT

Ref. No.2	Part No.	Part Name & Description	Remarks
320	TY-LA1000-K	LAMP UNIT	1 NOTE

NOTE:

The Lamp Unit (TY-LA1000-K) is not supplied as a replacement part. It is sold separately. To purchase a replacement, call the Panasonic accessory department.

17.4. ELECTRICAL REPLACEMENT PARTS LIST

Definition of Parts supplier:

1. **All parts are supplied from PSEC.**

PRINTED CIRCUIT BOARD ASSEMBLY

Ref. No.	Part No.	Part Name & Description	Remarks
E110	LSXA0625FL	LCD DRIVE C.B.A.	RTL E.S.D.
E111	LSEP3185A	LCD DRIVE CHILD C.B.A. *See Schematic Diagram & Circuit Board Layout Notes	RTL
E120	LSEP3166A	THERMISTOR 1 C.B.A.	RTL
E130	LSEB3137A	THERMISTOR 2 C.B.A.	RTL
E140	LSEP3160A	COVER SWITCH C.B.A.	RTL

17.4.1. LCD DRIVE C.B.A.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC2001	C1AB00002153	IC, LOGIC	E.S.D.
IC2002	C1AB00002153	IC, LOGIC	E.S.D.
IC2003	C1AB00002153	IC, LOGIC	E.S.D.
IC2004	C1ZBZ0002748	IC, LOGIC	E.S.D.
IC2301	LSEQ0810	IC, 32K EEP ROM	E.S.D.

Ref. No.	Part No.	Part Name & Description	Remarks
IC2302	C0EBE0000275	IC, CMOS STANDARD LOGIC	E.S.D.
IC2303	MN101C77CAA	IC, 8BIT MICROCONTROLLER	E.S.D.
IC2304	C0JBAB000619	IC, LINEAR *See Schematic Diagram & Circuit Board Layout Notes	
IC2501	C0DBFFD00003	IC, LINEAR	
IC2502	C0CBCBD00008	IC, LINEAR	
IC2503	C0JBCZ000519	IC, CMOS STANDARD LOGIC	E.S.D.
IC2505	C1AB00001945	IC, LOGIC	E.S.D. CSP
IC2901	C0DBEKG00004	IC, LINEAR	
IC2902	C0DBEKG00003	IC, LIENAR	
IC2903	C0DBEKG00003	IC, LIENAR	
IC2904	C0DBEKG00003	IC, LIENAR	
IC2905	C0ABBA000137	IC, LINEAR	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q2001	2SB1218AHL	TRANSISTOR SI PNP CHIP	
Q2001	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q2002	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q2002	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q2003	2SB1218AHL	TRANSISTOR SI PNP CHIP	
Q2003	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q2004	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q2004	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q2005	2SB1218AHL	TRANSISTOR SI PNP CHIP	
Q2005	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q2006	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q2006	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q2007	2SB1218AHL	TRANSISTOR SI PNP CHIP	
Q2007	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q2008	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q2008	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q2009	2SB1218AHL	TRANSISTOR SI PNP CHIP	
Q2009	B1ADCF000063	TRANSISTOR SI PNP CHIP	
Q2010	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q2010	B1ABCF000020	TRANSISTOR SI NPN CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D2001	MA3J142E0L	DIODE SI CHIP	
D2001	B0ADCJ000012	DIODE SI CHIP	
D2002	MA3J142E0L	DIODE SI CHIP	
D2002	B0ADCJ000012	DIODE SI CHIP	
D2003	MA3J142D0L	DIODE SI CHIP	
D2003	B0ADCJ000025	DIODE SI CHIP	
D2004	MA3J142D0L	DIODE SI CHIP	
D2004	B0ADCJ000025	DIODE SI CHIP	
D2005	MA2J111008	DIODE SI CHIP	
D2005	B0ACCK000005	DIODE SI CHIP	
D2005	MA2J11100L	DIODE SI CHIP	
D2006	MA2J111008	DIODE SI CHIP	
D2006	B0ACCK000005	DIODE SI CHIP	
D2006	MA2J11100L	DIODE SI CHIP	
D2301	MA3J142E0L	DIODE SI CHIP	
D2301	B0ADCJ000012	DIODE SI CHIP	
D2302	MA2J111008	DIODE SI CHIP	
D2302	B0ACCK000005	DIODE SI CHIP	
D2302	MA2J11100L	DIODE SI CHIP	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R2001	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2002	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2003	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R2004	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2005	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2006	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R2007	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2008	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2009	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R2010	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2011	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2012	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2016	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2017	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2018	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2019	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2020	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2021	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2022	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2023	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2024	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2025	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2026	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2027	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2028	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2029	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2030	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2031	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2032	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2033	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2034	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2035	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2036	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2037	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2038	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2039	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2040	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2041	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2042	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2043	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2044	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2045	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2046	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2047	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2048	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2049	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2050	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2051	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2052	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2053	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2054	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2055	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2056	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2057	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2058	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R2059	ERJ3GEYJ153V	MGF CHIP 1/16W 15K *See Schematic Diagram & Circuit Board Layout Notes	
R2060	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R2061	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2062	ERA3YED332V	MGF CHIP 1/16W 3.3K	
R2063	ERA3YED152V	MGF CHIP 1/16W 1.5K	
R2064	ERA3YED391V	MGF CHIP 1/16W 390	
R2065	ERA3YED472V	MGF CHIP 1/16W 4.7K	
R2066	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R2067	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R2071	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R2072	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R2073	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R2074	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R2075	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R2076	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R2077	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R2078	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R2079	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R2080	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R2081	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R2082	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2083	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2084	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2085	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2086	ERJ3GEYJ220V	MGF CHIP 1/16W 22	

Ref. No.	Part No.	Part Name & Description	Remarks
R2087	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2088	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2089	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2090	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2091	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R2092	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R2093	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2094	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2095	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2096	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2097	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2098	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R2099	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R2100	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R2101	ERJ6GEYJ273V	MGF CHIP 1/10W 27K *See Schematic Diagram & Circuit Board Layout Notes	
R2101	ERJ3GEYJ273V	MGF CHIP 1/16W 27K *See Schematic Diagram & Circuit Board Layout Notes	
R2302	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2303	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2304	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2306	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2307	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2308	ERJ3GEY0R00V	MGF CHIP 1/16W 0 *See Schematic Diagram & Circuit Board Layout Notes	
R2311	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R2314	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2317	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2318	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2319	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2320	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2321	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2322	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2323	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2324	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2325	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2326	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2327	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2328	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R2329	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2330	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R2331	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2332	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R2333	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2334	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R2335	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2336	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2337	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2338	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2339	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2340	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2341	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2342	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2343	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2344	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2345	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2346	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2347	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2348	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2349	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2350	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2351	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2352	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2353	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2354	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R2355	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2356	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2357	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R2358	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2361	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2362	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	

Ref. No.	Part No.	Part Name & Description	Remarks
R2363	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2364	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R2366	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2367	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R2369	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2370	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R2371	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2372	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R2373	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2374	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2375	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R2377	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2378	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2379	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2380	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2382	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2383	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2384	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R2385	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R2386	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2387	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2388	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2389	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2390	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2391	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R2394	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R2395	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2396	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R2403	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R2406	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2407	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2409	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2410	ERJ3GEYJ273V	MGF CHIP 1/16W 27K	
R2411	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2412	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2416	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2417	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2418	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2419	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2422	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2499	ERJ3GEY0R00V	MGF CHIP 1/16W 0 *See Schematic Diagram & Circuit Board Layout Notes	
R2502	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2503	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2504	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2505	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2508	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2509	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2510	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2511	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2512	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2513	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2514	D1H84704A008	ARRAY CHIP 47	
R2515	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2516	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2518	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2519	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2520	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2521	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2522	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2523	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2524	D1H84704A008	ARRAY CHIP 47	
R2525	D1H84704A008	ARRAY CHIP 47	
R2526	D1H84704A008	ARRAY CHIP 47	
R2527	D1H84704A008	ARRAY CHIP 47	
R2528	D1H84704A008	ARRAY CHIP 47	
R2529	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2531	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2532	ERJ3GEYJ203V	MGF CHIP 1/16W 20K	
R2533	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R2534	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2535	ERJ3GEYJ470V	MGF CHIP 1/16W 47	

Ref. No.	Part No.	Part Name & Description	Remarks
R2536	D1H84704A008	ARRAY CHIP 47	
R2537	D1H84704A008	ARRAY CHIP 47	
R2538	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2539	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2540	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2541	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2543	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2544	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2545	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2547	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2548	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2549	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2550	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2551	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2552	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2553	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2554	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2555	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2556	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2558	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2559	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2560	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2561	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R2562	D1H84704A008	ARRAY CHIP 47	
R2563	D1H84704A008	ARRAY CHIP 47	
R2564	D1H84704A008	ARRAY CHIP 47	
R2565	D1H84704A008	ARRAY CHIP 47	
R2566	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2567	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2568	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2569	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2590	ERJ3GEY0R00V	MGF CHIP 1/16W 0 *See Schematic Diagram & Circuit Board Layout Notes	
R2591	ERJ3GEY0R00V	MGF CHIP 1/16W 0 *See Schematic Diagram & Circuit Board Layout Notes	
R2901	ERJ14YJR47H	MGF CHIP 1/4W 0.47	
R2913	ERA3YED153V	MGF CHIP 1/16W 15K	
R2914	ERA3YED122V	MGF CHIP 1/16W 1.2K	
R2915	ERJ3GEYJ752V	MGF CHIP 1/16W 7.5K	
R2916	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R2917	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R2918	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R2919	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R2920	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R2921	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R2923	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R2924	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R2925	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R2926	ERA3YED223V	MGF CHIP 1/16W 22K	
R2927	ERA3YKD473V	MGF CHIP 1/16W 47K	
R2928	ERA3YED223V	MGF CHIP 1/16W 22K	
R2929	ERJ3EKF2201V	MGF CHIP 1/16W 2.2K	
R2931	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R2939	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R2942	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R2945	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R2947	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R2948	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R2949	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2950	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R2951	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2952	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R2953	ERJ3GEYJ101V	MGF CHIP 1/16W 100	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C2001	F1H1C104A008	C CHIP 16V 0.1UF	
C2002	F1H1C104A008	C CHIP 16V 0.1UF	
C2003	F1H1C104A008	C CHIP 16V 0.1UF	
C2004	EEEHB0J470R	ELECTROLYTIC CHIP 6.3V 47UF	
C2005	EEEHB0J470R	ELECTROLYTIC CHIP 6.3V 47UF	
C2006	EEEHB0J470R	ELECTROLYTIC CHIP 6.3V 47UF	
C2007	F1H1C104A008	C CHIP 16V 0.1UF	
C2008	F1H1C104A008	C CHIP 16V 0.1UF	
C2009	F1H1C104A008	C CHIP 16V 0.1UF	
C2010	F1H1E104A030	C CHIP 25V 0.1UF	
C2011	F1H1E104A030	C CHIP 25V 0.1UF	
C2012	F1H1C104A008	C CHIP 16V 0.1UF	
C2013	F1H1E104A030	C CHIP 25V 0.1UF	
C2014	F1H1E104A030	C CHIP 25V 0.1UF	
C2015	ERJ3GEYJ153V	MGF CHIP 1/16W 15K *See Schematic Diagram & Circuit Board Layout Notes	
C2015	ECJ1VF1C104Z	C CHIP 16V 0.1UF *See Schematic Diagram & Circuit Board Layout Notes	
C2016	F1H1E104A030	C CHIP 25V 0.1UF	
C2017	F1H1E104A030	C CHIP 25V 0.1UF	
C2018	F1H1C104A008	C CHIP 16V 0.1UF	
C2019	EEEHB1E330P	ELECTROLYTIC CHIP 25V 33UF	
C2020	EEEHB1E330P	ELECTROLYTIC CHIP 25V 33UF	
C2021	EEEHB1E330P	ELECTROLYTIC CHIP 25V 33UF	
C2022	F1H1E104A030	C CHIP 25V 0.1UF	
C2023	F1H1E104A030	C CHIP 25V 0.1UF	
C2024	F1H1C104A008	C CHIP 16V 0.1UF	
C2025	F1H1E104A030	C CHIP 25V 0.1UF	
C2026	F1H1E104A030	C CHIP 25V 0.1UF	
C2027	F1H1C104A008	C CHIP 16V 0.1UF	
C2028	F1H1E104A030	C CHIP 25V 0.1UF	
C2029	F1H1E104A030	C CHIP 25V 0.1UF	
C2030	F1H1C104A008	C CHIP 16V 0.1UF	
C2031	F1H1E104A030	C CHIP 25V 0.1UF	
C2032	F1H1E104A030	C CHIP 25V 0.1UF	
C2033	F1H1C104A008	C CHIP 16V 0.1UF	
C2034	F1H1E104A030	C CHIP 25V 0.1UF	
C2035	F1H1E104A030	C CHIP 25V 0.1UF	
C2036	F1H1C104A008	C CHIP 16V 0.1UF	
C2037	F1H1E104A030	C CHIP 25V 0.1UF	
C2038	F1H1E104A030	C CHIP 25V 0.1UF	
C2039	F1H1E104A030	C CHIP 25V 0.1UF	
C2040	F1H1E104A030	C CHIP 25V 0.1UF	
C2041	F1H1E104A030	C CHIP 25V 0.1UF	
C2042	F1H1E104A030	C CHIP 25V 0.1UF	
C2043	F1H1E104A030	C CHIP 25V 0.1UF	
C2044	F1H1E104A030	C CHIP 25V 0.1UF	
C2045	F1H1C104A008	C CHIP 16V 0.1UF	
C2046	F1H1C104A008	C CHIP 16V 0.1UF	
C2047	F1H1C104A008	C CHIP 16V 0.1UF	
C2048	F1H1C104A008	C CHIP 16V 0.1UF	
C2049	ECJ1VC1H221J	C CHIP 50V 220PF	
C2050	ECJ1VC1H221J	C CHIP 50V 220PF	
C2051	ECJ1VC1H221J	C CHIP 50V 220PF	
C2052	ECJ1VC1H221J	C CHIP 50V 220PF	
C2053	F1K1C2250005	C CHIP 16V 2.2UF	
C2054	F1H1C104A008	C CHIP 16V 0.1UF	
C2055	F1H1E104A030	C CHIP 25V 0.1UF	
C2056	F1H1E104A030	C CHIP 25V 0.1UF	
C2057	F1H1E104A030	C CHIP 25V 0.1UF	
C2058	ECJ1VC1H221J	C CHIP 50V 220PF	
C2059	ECJ1VC1H221J	C CHIP 50V 220PF	
C2060	F1H1E104A030	C CHIP 25V 0.1UF	
C2061	F1H1E104A030	C CHIP 25V 0.1UF	
C2062	ECJ1VC1H221J	C CHIP 50V 220PF	
C2063	ECJ1VC1H221J	C CHIP 50V 220PF	
C2064	ECJ1VC1H221J	C CHIP 50V 220PF	
C2065	ECJ1VC1H221J	C CHIP 50V 220PF	
C2066	F1H1E104A030	C CHIP 25V 0.1UF	
C2067	EEEHB1E330P	ELECTROLYTIC CHIP 25V 33UF	
C2068	F1H1E104A030	C CHIP 25V 0.1UF	
C2070	EEEHB1E330P	ELECTROLYTIC CHIP 25V 33UF	
C2074	EEEHB1E330P	ELECTROLYTIC CHIP 25V 33UF	
C2075	F1H1E104A030	C CHIP 25V 0.1UF	
C2076	F1H1E104A030	C CHIP 25V 0.1UF	
C2077	F1H1E104A030	C CHIP 25V 0.1UF	
C2078	F1H1E104A030	C CHIP 25V 0.1UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C2080	EEEHB1E330P	ELECTROLYTIC CHIP 25V 33UF	
C2081	F1H1E104A030	C CHIP 25V 0.1UF	
C2082	F1H1E104A030	C CHIP 25V 0.1UF	
C2083	F1H1E104A030	C CHIP 25V 0.1UF	
C2084	F1H1E104A030	C CHIP 25V 0.1UF	
C2085	F1H1E104A030	C CHIP 25V 0.1UF	
C2086	F1H1E104A030	C CHIP 25V 0.1UF	
C2087	F1H1E104A030	C CHIP 25V 0.1UF	
C2302	EEE0JA220SR	ELECTROLYTIC 6.3V 22UF	
C2304	F1H1C104A041	C CHIP 16V 0.1UF	
C2305	F1H1C104A008	C CHIP 16V 0.1UF	
C2306	F1H1C104A008	C CHIP 16V 0.1UF	
C2307	F1H1C104A008	C CHIP 16V 0.1UF	
C2308	F1H1H103A748	C CHIP 50V 0.01UF	
C2309	F1H1C104A008	C CHIP 16V 0.1UF	
C2310	EEE0JA470SR	ELECTROLYTIC 6.3V 47UF	
C2321	F1H1C104A008	C CHIP 16V 0.1UF	
C2322	F1H1C104A008	C CHIP 16V 0.1UF	
C2323	EEE0JA220SR	ELECTROLYTIC 6.3V 22UF	
C2327	ECJ1VF1C104Z	C CHIP 16V 0.1UF *See Schematic Diagram & Circuit Board Layout Notes	
C2502	F1H1C104A041	C CHIP 16V 0.1UF	
C2505	F1J0J2250003	C CHIP 6.3V 2.2UF	
C2506	F1H1A105A019	C CHIP 10V 1UF	
C2507	F1H1C104A008	C CHIP 16V 0.1UF	
C2508	F1H1H103A748	C CHIP 50V 0.01UF	
C2509	F1J1A1050004	C CHIP 10V 1UF	
C2511	F1H1H471A189	C CHIP 50V 470PF	
C2513	F1H1C104A008	C CHIP 16V 0.1UF	
C2514	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C2515	F1H1C104A008	C CHIP 16V 0.1UF	
C2516	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C2519	F1H1C104A008	C CHIP 16V 0.1UF	
C2520	F1H1C104A008	C CHIP 16V 0.1UF	
C2521	F1H1C104A008	C CHIP 16V 0.1UF	
C2522	F1H1C104A008	C CHIP 16V 0.1UF	
C2523	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C2526	F1H1C104A008	C CHIP 16V 0.1UF	
C2527	F1H1C104A008	C CHIP 16V 0.1UF	
C2528	F1H1C104A008	C CHIP 16V 0.1UF	
C2529	F1H1C104A008	C CHIP 16V 0.1UF	
C2530	F1J0J2250003	C CHIP 6.3V 2.2UF	
C2531	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C2535	F1H1C104A008	C CHIP 16V 0.1UF	
C2536	F1J0J2250003	C CHIP 6.3V 2.2UF	
C2537	F1H1C104A008	C CHIP 16V 0.1UF	
C2538	F1H1C104A008	C CHIP 16V 0.1UF	
C2539	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C2540	F1H1H103A220	C CHIP 50V 0.01UF	
C2541	F1H1C104A008	C CHIP 16V 0.1UF	
C2542	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C2543	F1H1C104A008	C CHIP 16V 0.1UF	
C2544	F1H1C104A008	C CHIP 16V 0.1UF	
C2545	F1H1C104A008	C CHIP 16V 0.1UF	
C2546	F1H1C104A008	C CHIP 16V 0.1UF	
C2547	F1J0J2250003	C CHIP 6.3V 2.2UF	
C2554	F1H1C104A008	C CHIP 16V 0.1UF	
C2555	F1J0J2250003	C CHIP 6.3V 2.2UF	
C2556	F1H1C104A008	C CHIP 16V 0.1UF	
C2557	F1H1C104A008	C CHIP 16V 0.1UF	
C2558	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C2901	F1H1C104A008	C CHIP 16V 0.1UF	
C2902	F1H1C104A008	C CHIP 16V 0.1UF	
C2903	F1H1C104A008	C CHIP 16V 0.1UF	
C2904	F1H1C104A008	C CHIP 16V 0.1UF	
C2905	F1H1C104A008	C CHIP 16V 0.1UF	
C2906	F1H1C104A008	C CHIP 16V 0.1UF	
C2907	F1H1C104A008	C CHIP 16V 0.1UF	
C2908	F1H1C104A008	C CHIP 16V 0.1UF	
C2909	F1H1C104A008	C CHIP 16V 0.1UF	
C2910	F1H1E104A030	C CHIP 25V 0.1UF	
C2911	F1H1E104A030	C CHIP 25V 0.1UF	
C2912	F1H1E104A030	C CHIP 25V 0.1UF	
C2913	F1H1E104A030	C CHIP 25V 0.1UF	
C2914	F1H1C104A008	C CHIP 16V 0.1UF	
C2915	F1H1C104A008	C CHIP 16V 0.1UF	
C2916	EEEHB0J101P	ELECTROLYTIC CHIP 6.3V 100UF	
C2917	EEEHB0J101P	ELECTROLYTIC CHIP 6.3V 100UF	
C2918	EEEHB1E100R	ELECTROLYTIC CHIP 25V 10UF	
C2919	EEEHB1C100R	ELECTROLYTIC CHIP 16V 10UF	
C2921	F1H1E104A030	C CHIP 25V 0.1UF	
C2922	F1H1E104A030	C CHIP 25V 0.1UF	
C2923	F1H1E104A030	C CHIP 25V 0.1UF	
C2924	F1H1E104A030	C CHIP 25V 0.1UF	
C2925	EEEHB1E100R	ELECTROLYTIC CHIP 25V 10UF	
C2926	F1K1A4750013	C CHIP 10V 10UF	
C2927	F1K1A4750013	C CHIP 10V 10UF	
C2928	F1K1A4750013	C CHIP 10V 10UF	
C2929	F1H1H103A220	C CHIP 50V 0.01UF	
C2930	F1H1C104A041	C CHIP 16V 0.1UF	
C2931	EEEHB1C100R	ELECTROLYTIC CHIP 16V 10UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L2001	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2002	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2003	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2004	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2005	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2006	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2007	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2013	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2014	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2015	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2016	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2301	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2302	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2510	J0JHC0000018	COIL CHIP 42UH	
L2511	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2512	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2513	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2514	J0JCC0000077	BEAD INDUCTOR CHIP 600UH	
L2908	J0JHC0000018	COIL CHIP 42UH	
L2909	J0JHC0000018	COIL CHIP 42UH	
L2910	J0JHC0000018	COIL CHIP 42UH	
L2911	J0JHC0000018	COIL CHIP 42UH	

CRYSTAL OSCILLATOR

Ref. No.	Part No.	Part Name & Description	Remarks
X2301	H2D800400017	CRYSTAL OSCILLATOR	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P2001	K1MN36BA0079	CONNECTOR 36P	
P2002	K1MN36BA0079	CONNECTOR 36P	
P2003	K1MN36BA0079	CONNECTOR 36P	
P2301	K1KA08AA0083	CONNECTOR 8P	
P2302	K1KA02AA0142	CONNECTOR 2P	
P2303	K1KA02BA0047	CONNECTOR 3P	
P2501	K1KA20B00153	CONNECTOR 20P	
P2502	K1KA02BA0014	CONNECTOR 2P	
P2901	K1KA08B00256	CONNECTOR 8P	
P2902	K1KA03BA0050	CONNECTOR 2P	
P2903	K1KA03BA0047	CONNECTOR 3P	
P2904	K1KA03BA0050	CONNECTOR 2P	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
206	LSSC0769	LCD DRIVE SHIELD CASE TOP,STEEL	
207	LSSC0770	LCD DRIVE SHIELD CASE BOTTOM,STEEL	
763	LSMG0141	THERCOON SHEET	
764	VMTS0059	CUSHION,RUBBER	

Ref. No.	Part No.	Part Name & Description	Remarks
765	VMFS0213	SHEET	

17.4.2. LCD DRIVE CHILD C.B.A.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC1	C0JBAB000619	IC, LINEAR *See Schematic Diagram & Circuit Board Layout Notes	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C1	ECJ1VF1C104Z	C CHIP 16V 0.1UF *See Schematic Diagram & Circuit Board Layout Notes	

17.4.3. THERMISTOR 1 C.B.A.

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R2811	D4CA35030002	THERMISTER	⚠

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P2811	K1KA02AA0182	CONNECTOR 2P	

17.4.4. THERMISTOR 2 C.B.A.

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R2821	D4CE31330001	THERMISTOR	⚠

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P2821	K1KA02AA0300	CONNECTOR 2P	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
750	VZFS0006	CLAMPER	
752	LSLQ0307	FERRITE CORE	
762	LSJA0533	CONNECTOR CABLE W/PLUG	

17.4.5. COVER SWITCH C.B.A.

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P2912	LSJA0551	CONNECTOR CABLE W/PLUG	

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW2911	K0L1BA000114	SWITCH	